Address in Medicine:

RECENT ADVANCES IN PRACTICAL MEDICINE.

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GENTLEMEN,—Thinking over the best way in which to fulfil the task which I am honoured by the request of the Council to perform to-day it occurred to me that a few remarks on the developments of medicine from one in the current of practical work might be more interesting and appropriate than any more exhaustive discussion upon some one topic. Such remarks must necessarily be incomplete and fragmentary, reminding the hearers of what they already know in detail, suggestive of the trend of medical opinion to-day, and perhaps reviewing some of the changes in doctrine and practice within recent times. In one brief hour it is of course impossible to attempt to do literary or other justice to those who have kept medicine in the front line of the liberal professions. The masters in medical science are well known to us; their deeds are all recorded for our example; and their lives were lived in the interest and satisfaction of an all-absorbing pursuit which rewards labour and salves or subdues its disappointments.

As in the past, so in the future, medicine, whether as a philosophy or a science or a beneficent calling, promises ever to find employment for the most cultivated, the most practical, and the best ordered intellects of the time; and perhaps of no other profession can it be said that in the pursuit of it all its members of all degrees, by directly or indirectly ministering to the relief of human suffering, enjoy the same range and intensity of interest and satisfaction. At no time has medicine been better adapted for study as a philosophy or a pure science than at the present. At no previous period in its history could its branches and offshoots give better promise of bearing fruit for the good of humanity to those who with leisure and sufficient wealth should cultivate them with industry and scientific zeal. The roll of the Royal College of Physicians includes the names of several Fellows who may be regarded as philosophers rather than as practising physicians, others are directors of State or research medicine, and by no one Fellow have the highest practical interests and philanthropic aspects of the medicine of to-day been more stimulated, encouraged, and promoted than by H.R.H. the Prince of Wales who has recently honoured the College by allowing his illustrious name to be placed upon the roll. We are certainly better equipped for exact diagnosis now than ever before and possess a larger and a more precise knowledge of a greater number of diseases. It would be shameful if this were not so, but it must be conceded that medicine has shown no lack of industry in utilising every advance in science and art available to the purpose. There are still some members of this Association who may remember the introduction of the stethoscope into practical use. Are there any now living who will witness its substitution by other instruments? That the stethoscope has passed the zenith of its popularity I do not doubt, and it may, in part at least, come to be replaced by other methods of diagnosis.

It is probable that the introduction of photography into clinical medicine and the more general use of bacteriological examination and surgical exploration may, for a time at least, dim the prestige of auscultation and palpation in diagnosis. It should not be so. A great responsibility rests upon the teachers of medicine of to-day to keep up the refinements of auscultatory and tactile diagnosis with all the additional precision that instrumental education by graphic methods and surgical introspection will afford. The flexible stethoscope which has come almost exclusively into use within the last 20 years, although a valuable and convenient instrument, is not one calculated to advance the refinements of auscultation. Whilst it intensifies sound it practically obscures impulses. The delicate mechanism of the ear can appreciate through the medium of the rigid stethoscope shocks and impulses not to be recognised by the hand and which are lost in transit through an elastic medium. Thus the sense of touch in auscultation is, if I may use the phrase, in a certain degree becoming lost to us. I have known the diagnosis of an aneurysm missed in this way and many of the points in cardiac conditions, especially exaggeration or otherwise of beat, shock, and accentuation sounds, estimation of force, &c., are better recognisable with the rigid stethoscope. It is all-important, of course, to maintain our sense of proportion and comparison by adhering mainly to one instrument, but the tactile element in auscultation cannot be replaced by any equivalent means of diagnosis. Happily, we already see a revival of the appreciation of the pulse in practical medicine—an appreciation increased, not obscured, by the careful and detailed study and comparisons rendered possible by graphic recording methods, which very methods for a time threatened to discourage direct tactile observations. Except in the clinical wards and the physiological laboratory the day of the sphygmograph may be said to be already past, but for the purposes of exact instruction with regard to the palpable features of the pulse it and all allied instruments must ever remain invaluable. It is an instrument *par excellence* for the school in the hands of an expert rather than for ordinary clinical use. The clinical habit of listening to the heart, not only with the view of hearing morbid sounds but to estimate work value, is also of recent acquirement and thus we are coming better to perceive the true function and value of instrumental methods to illustrate, record, and instruct in the more accurate use of our naked senses.

THE CLINICAL THERMOMETER.

The late Sir William Jenner, my revered teacher, in an address before this Association 30 years ago, classified the thermometer with the stethoscope in clinical medicine, yet but a few years before the instrument was looked at askance by the greatest of physicians. It is as important in bedside medicine to-day as the barometer and compass combined are in navigation and where we are sometimes led astray by pyrexial charts it is not the thermometer that is at fault but our insight that is imperfect. Not long ago the thermometer came almost to be regarded as a divining rod and a sole and sufficient indicator in febrile affections, and the temperature mistaken for the disease has been pursued round the dial by antipyretic medication and measures to the spoiling of the chart, the detriment of the patient, and the disappointment of the medical man. It is only comparatively recently that we have fully recognised that it is merely the exuberances of temperature or the abnormal effects produced upon the nervous system of individual patients by temperatures otherwise normal to diseased conditions that can be wisely treated by antipyretics. A better knowledge of the habits and vital history of the micro-organisms upon whose doings pyrexial phenomena so largely depend informs us that their initial attack and greatest activity are at the lower ranges of temperature and that the higher ranges, the results of such activity, are more or less inhibitive to their well-being; so that given a febrile disease we must accept without necessarily interfering with a temperature normal to it. Thus we have often observed a pneumonia or an influenza treated too vigorously with pure antipyretics pursue an abnormally stormy and adynamic course.

ANOMALOUS FEVERS.

The clinical study of anomalous fevers has gradually convinced us that in the development and full activity specific poisons may overlap one another in the same illness; thus the typical *crescendo* temperature of the early period of an enteric fever may be masked by the fluctuating pyrexia due to the toxin of an associated sepsis or by the more abrupt incidence of a pneumonic or a rheumatic fever, and it is only as the course of these overlapping complications draws to a close that the more continued latent fever dawns through their misleading perturbations. In the later periods of enteric fever, again, the pyrexial process is normally overlapped and modified by blood contamination from the intestinal lesions sometimes amounting to pyæmia. A rational treatment of specific diseases must be guided by the recognition of these superfactors. I would venture to say in this

connexion that the rational and most successful treatment of tuberculosis is for the most part unwittingly directed to attendant phenomena which are secondary and which for brevity sake we call septic. Tubercle in tissues at rest and protected from impure atmospheric contamination tends to obsolescence; our antiseptic treatment and our pure-air methods are mainly operative against such secondary infections. Although in the diagnosis of fevers we have still in the main to trust to the gradual evolution of the characteristic features of the primary or predominant disease we have auxiliary tests of modern design—some purely chemical, such as Ehrlich's; others furnished by examination with bacterial re-agents, such as Widal's test in enteric fever; none of them quite crucial, but both, and especially Widal's, of considerable value in anomalous cases.

THE COMBINATION OF SURGERY WITH MEDICINE.

Time does not permit me to do more than allude to the wonderful accession to preciseness in diagnosis as well as in successful treatment that has become possible of late years from the developments of surgery under Listerian methods. Perhaps one could not suggest better illustrations of the value of combined surgery and medicine than can be found in the diagnosis and treatment of cases of impacted gall-stones, renal calculi, appendix disease, obscure empyema, and sequestral lung disease, cases that but a few years ago involved months of suffering and a fatal issue, but which can now be explored with little danger and often treated with complete success.

BACTERIOLOGY.

It must be confessed that bacteriology in its application to diagnosis and treatment in practical medicine is yet in its infancy, but it is a very robust infancy, full of promise, the complete fulfilment of which none of us will live to see. The bacterial origin of tubercle, anthrax, diphtheria, erysipelas, septicæmia, typhoid fever, malaria, and influenza has been revealed to us almost within the memory of the youngest here and has already been in many instances fruitful in suggesting measures of prevention and treatment. Bacteriology in all its departments is, and must ever remain, subject to expert investigation. It is impossible for the busy practitioner to find the time or to maintain the technical skill and apparatus necessary for trustworthy investigation. The various research associations have hitherto in part fulfilled the want and the bacteriological departments of our hospitals are steadily growing in importance and value, but it is to be hoped that the time will soon come when in every district throughout the country there will be in connexion with the Public Health Department a bacteriological laboratory where the ordinary, and even the extraordinary, clinical tests will be at the command of every practitioner at a moderate scale of fees. Those who possess the D.P.H. degree should be the qualified experts. In many districts these laboratories already exist and they would probably all pay a remunerative interest upon public capital expended upon their upkeep. It is a matter for congratulation to see the departments of research and clinical observation approaching to closer communion in our great hospitals, a coöperation which cannot but be to the great advantage of the physicians and I venture to think scarcely less so to the research expert. We are thus acquiring daily a more accurate knowledge of organised poisons and we are interpreting better the phenomena they produce.

SUSCEPTIBILITY *v.* IMMUNITY.

I am inclined to think that we are also coming to recognise better the third circumstance which renders virulent the specific microbe to its host. It has long been clear to every observant physician who has, on the one hand, even superficially kept in view the results of bacteriological inquiry and who has thought upon the incidences of such infective diseases as he happens to meet that we carry about with us in our accessible mucous tracts, and especially in our naso-oral and respiratory passages, amidst other unconsidered trifles and as yet unclassified germs, samples of the organisms specific to many diseases. We are tenanted by these varied organisms from time to time in small colonies or singly, rendered inert only through want of opportunity. The very careful observations of Dr. St Clair Thomson and Dr. Hewlett recorded in the *Medico-Chirurgical Transactions* for 1895 show that there is a natural cleansing if not antiseptic secretion from the healthy nasal membrane which preserves it from contamination by the numerous organisms which abound in the nasal avenues, so that mucus taken from the central membrane of the nose in health may contain few or none. Other bacteria surround us on all sides and from time to time obtain a temporary but abortive lodgement within us; virulent catarrh, diphtheria, pneumonia, influenza, tuberculosis, erysipelas, perhaps rheumatism, and probably in epidemic times some of the other infective diseases would be represented in one or other category amongst our domesticated or casual occupants. It is not, however, enough to have the poison germ on the one hand to acquire the disease on the other; there are intermediate or antecedent circumstances of dosage, acquired susceptibility or that subtle malformation of tissue in certain organs which is inherited and renders them weak in resistance to certain forms of attack. Let a period of depression come over us, involving some slight change in our blood or tissues, some local or general alteration in our chemical or vital functions, and one or other of these organisms may receive the opportunity for aggressive cultivation. We virtually know that this is so in the case of a common cold. Acquired by a momentary chill at an open door or through wet boots such a catarrh becomes at once a highly contagious disease and will "run through the house." There can be no doubt that the catarrh is associated with the cultivation of an organism; it is equally probable that that organism must have pre-existed in some part of the nasal surface. Does some vaso-motory disturbance bring about the local conditions of increased heat and moisture needful for that particular form of microbe cultivation or is it merely depressed vitality that makes the host susceptible? No one, so far as I am aware, has yet condescended to work out the bacteriology of a common cold. Yet it is the type of a large number of more important diseases and carefully investigated it would, I believe, be fruitful in side-lights upon their etiology and prophylactic treatment.

Dr. Washbourn, with whom I was discussing this question the other day, referred me to a most interesting and suggestive inquiry which he had made with regard to a case of recurrent catarrh, apparently simple. I must refer you to the paper, which is very short (being a single inquiry), for details, but I may briefly say that in an apparently simple coryzal catarrh a bacteriological investigation of the mucous discharges revealed the presence of characteristic influenza bacilli and of pneumococci. The patient, aged 35 years, had been subject to similar, or apparently similar, attacks so long as he could remember. He had also had many recognised attacks of mild influenza and had been working at the bacteriology of pneumonia. There are many people of somewhat feeble vitality whose complaint is that they are constantly catching colds. Such attacks are due probably to the cultivation of successive crops of an ever-present organism. We have little power in attacking the organism; we might as well do battle with a sunbeam. Our treatment is to fortify the host, although, meanwhile, some local applications of a cleansing kind will in these, as in hay asthma, help to protect from the poison. Whatever the true bacteriology of a common cold may be, this humble malady is one of the most common starting-points of more important respiratory diseases both as regards initial and secondary attacks.

Some few years ago I saw in consultation a medical friend who had pneumonia of a pythogenic type; but in response to my inquiry about drains I was informed that he had been in the house for some years, that he had a healthy family of young children, and that he himself had been in perfect health until he went out thinly clad on a cold night and got definitely chilled. He died after the lapse of a day or two and on investigation a free communication was found to exist between the main drain and his surgery. This gentleman must for some months have been occupied by microbes which did not become operative under the control of a robust vitality until that vitality was temporarily impaired.

The tendency to rheumatism runs in families. It is hardly possible to conceive that chorea is not a manifestation of the rheumatic poison, which is most probably a micro-organism. A mental shock is the usual intervening etiological factor in chorea, which presumably weakens the resistance of the nerve centres upon which the toxic influence falls. It is hardly possible that the mental shock and infection should have coincided in time; until more exactly informed we can only provisionally assume that the infective agent was indefinitely pre-existent. This intermediate quantity in infective disease requires to be yet more carefully thought out in regard to measures of prevention and even of treatment. Much has

been done by physicians in the last generation in general preventive hygiene with regard to the diseases then recognised as specific before their knowledge of the virus of these diseases was so accurate as now. More may yet be done if with the growing precision of our knowledge of the infective elements we maintain our inquisitiveness as to the conditions under which they become operative.

SERUM THERAPEUTICS.

I am in no way competent to discuss the question of serum therapeutics from the bacteriological side, I will only glance at it from the side of results achieved in the form of additions made, and others we may hope to make, to our therapeutics. It is already an immense achievement if we have acquired the knowledge that every infection requires a separately prepared serum for its treatment. It explains many of our failures and gives promise of adding to our successes. It has for some time been recognised that infective endocarditis has a manifold microbic pathology—streptococcus, staphylococcus, pneumococcus, and gonococcus are some of the organisms concerned. It is useless to employ an anti-streptococcus serum for a pneumococcus infection, and even the two organisms, streptococcus and staphylococcus, which seem to work most cordially identifying the organism, or, indeed, in recognising any organism, for with well-marked clinical features the specimen of blood examined may be sterile. We may yet for some time to come, therefore, as in complex cases of enteric fever, with which these cases are often confounded, have to rely upon the general clinical phenomena presented by the case and its history of attack in our attempt to identify the poison and in our endeavour to select the antidote. Whilst the possibility of neutralising by appropriate treatment the specific poison in certain diseases will relieve practitioners of some anxiety, it cannot fail, on the other hand, to add much to the tension of their labours by requiring an earlier diagnosis, and by the great care needed to avoid accidents in the use of delicate organic fluids prone to contamination and decomposition. It is impossible that the treatment can be much developed in general use until abundant local centres are secured for the provision of materials of guaranteed purity. It is curious and instructive to note that in the two diseases in which antitoxins are of most approved value—namely, diphtheria and tetanus—the bacillary cultivation is declared (Behring) to be limited to the seat of inoculation, the blood only being charged with their toxins. Whereas the mortality from diphtheria but a few years ago varied from 25 to 50 per cent., according to

TABLE INDICATING THE ACTIONS OF VARIOUS SERA.

—	Bactericidal.	Antitoxic.	Prophylactic.	References.
Diphtheria	*Nil*	Strongly *	Decidedly (similar to tetanus)	Behring,[1] Cobbett and Kanthack,[2] Clinical Society,[3] Sims Woodhead,[4] American Pediatrics Society.[5]
Tetanus...	*Nil*	To circulating poison, that which is as yet unfixed by the tissues. More promising in early and less acute cases. Cerebral or subdural injection preferred.	Prophylactic for tissues as yet not attacked	Roux and Borrel,[6] Köhler.[7]
Septicæmia † (streptococcal and allied affections, erysipelas, puerperal fever, &c.)	Doubtful	Decidedly	Decidedly	Bulloch,[8] Mitchell Bruce,[9] Commission American Gynæcological Society,[10] Petruschky.[11]
Pneumonia	Probably not	Decidedly (experimentally)	Decidedly (experimentally)	Pane, Eyre and Washbourn,[12] Mennes.[13]
Yellow fever	Encouraging results	*Nil*	Decidedly	Sanarelli.[14]
Snake poison	—	Antitoxic	Prophylactic	Calmette and Delarde.[15]
Leprosy...	?	? (probably not)	?	Atherstone and Black,[16] Herman and Abraham,[17] Palakawski.[18]
Botulismus (meat poisoning)	—	Antitoxic	Prophylactic	Van Ermenger,[19] Kempner.[20]
‡ Plague	—	? Slight	Decidedly	Haffkine,[21] Clemow.[22]
‡ Cholera	Yes	Not	Decidedly	Haffkine.[23]
Anthrax	Yes	Not	Decidedly	Haffkine.[24]

* N.B.—Paralytic affections are apparently increased by the use of antitoxin, a greater number of lives being preserved to the period when paralysis occurs.

† N.B.—The "streptococcal infections" are difficult to differentiate and are frequently manifold, so that for the present each case is more or less experimental and must be judged on its own merits until we can push diagnosis to exact variety of organism or organisms involved.

‡ In plague and cholera the treatment is rather a vaccination than a serum treatment.

in couples, require a separate treatment. Thus is in part accounted for the very poor success as yet achieved by the serum treatment of this and of some other maladies more or less allied to it. From the clinical side one would judge there to be very frequently more than one poison in association. This is certainly the case in many diseases—for example, in the third and often in the first stage of enteric fever, in the suppurative stages of tuberculosis, in scarlet fever, and perhaps in gonorrhœal rheumatism. In pneumonia, again, it is remarkable that in every variety of the disease, the sthenic, the asthenic, the typho-pneumonia, the septic pneumonia, and the influenzal catarrhal forms, the characteristic pneumococcus is invariably to be found, and this coccus may be the micro-organism conspicuously present in those secondary lesions with which pneumonia is often complicated and which are attributed to it, such as empyema, infective endocarditis, &c. Yet there are, I think, good reasons to doubt whether the pneumococcus organism alone, unassisted by some of its pyogenic *confrères*, is ever able to bring about these secondary lesions which are usually attributed to it. We must push our diagnosis, then, further to include a recognition of the precise organism or organisms which have obtained lodgement in any given case. Unfortunately, in the earlier stages at least of ulcerative endocarditis bacteriological investigation is by no means always successful in the severity of the epidemic, it has been reduced by the serum treatment to from 25 per cent. to 8 per cent., according to the severity of the case and the date of infection.

[1] Behring: Clifford Allbutt's System of Medicine, Article, Serum Therapeutics. [2] Cobbett and Kanthack: Ueber das Schicksal des Diphtherie toxins im Tierorganismus, Centralblatt für Bakteriologie, Band xxiv., August, 1898. [3] Committee on the Antitoxin of Diphtheria, Transactions of the Clinical Society, vol. xxxi., 1898. [4] Woodhead: Proceedings of the Society of Medical Officers of Health, Feb. 10th, 1899. [5] American Pediatrics Society's Collective Investigation on Antitoxin in Diphtheria in Private Practice, May 26th, 1896. [6] Roux and Borrel: Tétanos Cérébral et Immunité contre le Tétanos, Annales de l'Institut Pasteur, April, 1898. [7] Kohler: Zum gegenwärtigen Stand der Serumtherapie des Tetanus, Münchener Medicinische Wochenschrift, No. 46, 1899. [8] Bulloch on Streptococcus Pyogenes, Transactions of the British Institute of Preventive Medicine, First Series, 1897; also THE LANCET, May 2nd, 1896. [9] Bruce: Septicæmic Infection treated with Anti-streptococcic Serum, Brit. Med. Jour., July 8th, 1899. [10] Committee of the American Gynæcological Society on Anti-streptococcic Serum in Puerperal Sepsis, Philadelphia Medical Journal, June 3rd, 1899. [11] Petruschky: Ueber Antistreptokokken Serum, Zeitschrift für Hygiene, Band xxii., p. 485. [12] Eyre and Washbourn: Experiments with Pane's Anti-pneumococcic Serum, THE LANCET, April 8th, 1899. [13] Mennes: Zeitschrift für Hygiene, Band xxv., p. 413, 1897. [14] Sanarelli: Sur l'Emploi du Sérum Curatif et Preventif de la Fièvre Jaune, Annales de l'Institut Pasteur, tome xii., 1898. [15] Calmette and Delarde: Ibid., tome x., p. 12, 1898. [16] Atherstone and Black: Official Reports upon the Serum Treatment of Leprosy, Centralblatt für Bakteriologie, Band xxiv., p. 178. [17] Herman and Abraham on a New Serum for the Treatment of Leprosy, ibid., Band xxiv., p. 179. [18] Palakawski: Deutsche Medicinische Wochenschrift, 1898, No. 37. [19] Van Ermenger: Zeitschrift

Unfortunately we have not yet been supplied with any reliable antidote for the serum treatment of pneumonia. I was good-naturedly twitted by some of my friends in their criticism of a book published eight years ago because I did not speak well enough of the then recent observations of the Drs. Klemperer on the serum treatment of pneumonia; but in a paper read before this Association in London five years later I could say no more, and to-day, although Pane's anti-pneumococcic serum will protect a donkey or a rabbit from the evil consequences of a strong dose of pneumococcus infection,[25] it has not as yet come into practical use in the human disease. I have recently tried it in two cases without result. This may be due to three causes. In the first place, it is difficult to use the serum early enough in the disease, and, secondly, the most severe cases in which alone at present one feels disposed to try the remedy are most generally complicated with some other infection, so that the pneumococcus in the sputum does not signify the sole—perhaps not the most important—element of danger in the case. Thirdly, the doses employed by Pane have been very large, so large that one shrinks from introducing in such bulk an unknown or imperfectly accredited element into any case not already desperate. In the use of these very large doses my friend Dr. Charles of Rome has suggested to me the introduction of the serum per rectum as a method which he has known to prove efficacious with other serums, the absorption being rapid and the serum being unchanged. As yet, however, the serum cannot be obtained in sufficient quantity for use in such large doses. In all probability the want of success, with casual exceptions, in the antitoxin treatment of erysipelas, puerperal fever, and allied affections, including infective endocarditis, may be similarly accounted for by the presence of more than one organic infection, thus requiring, as pointed out by Behring, Pfeiffer, and Kanthack, more than one antidote. I cannot mention the name of Kanthack without deploring the loss which our profession and humanity at large have suffered through the early death while yet in full vigour and promise of work of this most able pathologist.

PREVENTIVE INOCULATION.

It seems possible that we may look in the near future for considerable development of preventive serum treatment in the prophylaxis of endemic diseases. Already within the past few months we have seen maturing towards successful action the researches of Haffkine and Wright and others on the means of procuring immunity from typhoid fever and plague in those regions of our world-wide empire in which as yet the sources of the infection were beyond our control. We are no doubt becoming more susceptible to specific infections from the very increasing purity of our sanitary home surroundings, and it may be the more necessary on this account to grant an artificial immunity for those about to proceed to less favoured regions and who would otherwise present, as it were, a virgin soil for microbic cultivation. Indeed, the whole question of antitoxin and serum therapeutics has only within the last five years become of practical interest to the physician. Doubtless many mistakes will have to be retrieved, many apparent steps forward retraced, but we may expect every day to bring to light fresh developments in the sure advance of the new departure. It must be a matter of consolation to our ultra-humane friends to note that although some sacrifice and some suffering to animal life may be involved in the necessary experiments countless dumb creatures as well as many mere human beings will thereby be saved from destruction.

THE PREVENTION AND TREATMENT OF TUBERCULOSIS.

Amongst the questions that have in the present year ripened considerably and have been urged forward strenuously towards a final settlement, that of the prevention and treatment of tuberculosis has taken a very prominent place and it is impossible not to allude to it here, although it will be the subject of a special discussion in the Medical Section. Truly, a disease which still claims one-ninth of our mortality may well command our deepest interest. That much has been done to diminish our national liability to consumption by improved sanitation on general grounds by Parkes, Simon, Bowditch, Buchanan, Milroy, MacCormac, Smith, and Greenhow is evident by the gradual reduction of the mortality in the last half-century from 38 to 14 per 10,000 living,[26] or in proportion to the population for England and Wales by one half since 1851 (Tatham). Even in comparing the quinquennium 1875–79 with that of 20 years before Longstaff found that the mortality from phthisis at the ages between five and 35 years had decreased by 15 to 28 per cent., and he could say in 1884 that "the decline of the deaths in recent years is chiefly to be attributed to a diminished number of deaths assigned to fever and phthisis."[27] All this has been effected without direct reference to the special bacillus element in the disease, chiefly by amending those conditions to which I have alluded as being intermediate between the bacillus attack, of which most of these pioneers in tubercle sanitation knew nothing, and the illness of the patient. It may, however, be urged with some justice that we in this country have been behind our continental friends in grasping the full significance from a prophylactic point of view of the discovery of a definite infective bacillus element in the disease which was made 17 years ago and anticipated 17 years previously. For our sins in this respect, and perhaps in part because there are political and commercial as well as human interests concerned in the further measures necessary, the question of the prevention of consumption, which should have been calmly and forcefully considered as heretofore by experts in human and veterinary medicine, has become the subject of popular agitation with all the reckless exaggeration and no little threatening of the social tyranny which such agitations tend to produce. The whole subject seems to me, however, to have been well and fully discussed by delegates from all parts of the world at the Berlin Congress and I believe that the careful, temperate, and broad-minded summary of the proceedings added by Dr. Pye-Smith to the report of the British delegates will do much to bring the matter again within the sphere of sober practical work on the part of private medical men and the proper State departments. That it is *au fond* a right grouping to place all the previously ascertained causes of consumption amongst the predispositions and to regard the disease itself as produced by definite infection or contagion through the inhalation of sputum dust or by the ingestion of tuberculous foods has been accepted at least for the last 10 years, but we must not discontinue to attach a due importance to the other etiological factors because one of them may seem *primâ facie* to be sufficient. To set heredity at nought, to regard climatic considerations as of no importance, and to state that the disease is always acquired by direct contagion or infection, is, in my opinion, to ignore much that is true and to magnify that which should be carefully guarded from exaggeration.

Thirty years ago Sir W. Jenner, in an address to the Epidemiological Society, declared the transmission of tuberculosis from parent to child to be one of the best-established facts in medicine. Jenner did not mean by this the actual transmission of tubercle, nor has anyone that I know of, in modern times at least, made any such contention; but that the susceptibility to become tuberculous runs in families, this, I must confess, remains with me an unshaken belief. Take, for example, on the one hand, the striking account by Dr. Reginald Thompson[28] of 80 families of consumptive parentage yielding 385 children of whom 194 became phthisical and 37 died in infancy, leaving only 154 exempt. Consider this in account with the unproven direct communicability of the disease to which I shall presently allude, as shown by the distribution of mortality amongst married people compared with their numerical liability as members of the general public, and the case for heredity as a predisposing cause of consumption is a strong one if not still "one of the best established facts in medicine." We cannot, of course, prevent consumptive people from marrying; there are exceptional conditions under which they may rightly do so, but the advice of the family physician should be steadfast in discouraging such alliances which are unfortunately often prolific. Life assurance offices, whose calculations are based upon experience, will probably wait for much further evidence against the heredity of phthisis before they will feel justified in accepting without surcharge the lives of those who present a

für Hygiene, Band xxvi., 1897. [20] Kempner: Das Antitoxin des Botulismus, ibid., Band xxvi. [21] Haffkine: A Discourse on Preventive Inoculation, delivered at the Royal Society, London, June 8th, 1899. [22] Clemow: The Serum Treatment of Plague, THE LANCET, May 6th, 1899. [23] Haffkine: Loc. cit. [24] Ibid. Washbourn: Clinical Journal, March, 1899. Powell: Introduction to Discussion on Pneumonia, Brit. Med. Jour., 1896.

[25] Eyre and Washbourn: Loc. cit.

[26] Ransome: Researches on Tuberculosis, p. 2, pp. 28, 33, and 83.

[27] Longstaff: Statistics, p. 252.

[28] Family Phthisis, 1894, p. 45.

consumptive family history. We are all familiar with circumstances connected with the incidence of certain cases of tuberculosis which render it probable that they have been acquired by indirect contagion through the contaminated dust of dirty rooms, and know that under certain conditions of stagnant, dark surroundings a patient with advanced phthisis of unclean habits would cause local danger of tuberculous infection to his attendants and friends and to future occupants of the room. But except under such and similar almost experimental conditions the evidence of the contagiousness of phthisis is extremely slender. It, for instance, has not been proved that tuberculosis is more prevalent amongst married than single people and Dr. Longstaff[29] has shown that normal coincidence would account for more than the deaths reported. Pulmonary consumption is comparatively rare before puberty, infantile mortality being almost exclusively from bowel consumption through milk infection. Tuberculosis is nearly twice as frequent amongst male as amongst female infants. The mortality from tuberculosis has diminished more greatly by from one-third to one-fourth amongst females than males above the age of 20 in the last 30 years (Hugh Beevor),[30] when one would think that industrial, nursing, and indoor conditions generally would have told against the female in this respect. The records of the officials and servants of one of our largest consumption hospitals taken out for 50 years, including a period precedent to the use of any special preventive measures beyond those of ordinary sanitation, show a death-rate not in excess of that of the ordinary population.

Whilst, therefore, on the one hand, advising every ordinary measure of cleanliness, avoidance of dust, and proper disposal and disinfection of sputum we may, and indeed must, avoid all exaggerated statements calculated to alarm the public as to the contagion of phthisis. In respect of sanitary precaution I would instance the simple and efficient directions of the medical officer of health of Brighton[31] as being in most re-assuring and refreshing contrast to the theoretical and alarming precautions printed for some other health resorts and published on no official authority. These directions are, I understand, privately sent through the medical practitioner to the person affected.

THE SOIL AND DISEASE.

It is again difficult to recognise the striking testimony of such reliable observers as Middleton, Bowditch, and Buchanan as to the influence of a wet subsoil on the prevalence of consumption with the present view of the acquirement of the disease only by human and bovine infection. We must recall, too, to mind the enormous prevalence of bovine tuberculosis, not, be it observed, only among stall-fed, crowded, and insanitary cattle communities, but amongst animals under good open-air conditions. Do we not find in this prevalence of tubercle amongst pasture-fed cattle, and in the fact of the prevalence of the disease in localities with wet subsoils and deficient sunlight,[32] some probability that the tuberculous organism, like those of actinomycosis, tetanus, and anthrax, may have an independent and pre-parasitic existence, and that, like malaria, tuberculosis will probably be found to have a double origin from purely microphytic as well as from parasitic infection? It is remarkable that two at least of the most deadly of disease microbes, tetanus and anthrax, should be normal inhabitants of the soil, and yet how comparatively scarce these diseases are and, as regards one at least, how communicable. It would seem that, as is the case also probably with malaria, whilst the ultimate source of the disease is vegetation in the soil, yet a greater virulence and activity is attained, and for a short time maintained, by cultivation in the human body or in that of certain other warm-blooded animals. With regard to tuberculosis I would make this final remark: that whilst we may hope, on the one hand, by further careful sanitation, by destroying and diminishing the careless distribution of bacillary dust, and by withdrawing from human consumption tuberculous foods, still to effect a considerable inroad upon the remaining 14 per 10,000 mortality from consumption, we cannot afford, on the other hand, to withdraw or relax precautions dictated by observations, sound in themselves, although in some regards capable of amended explanation, or we may have to make some deductions from the two-thirds diminution in mortality already achieved. In my belief there is a mephitic laboratory beyond our special control, yielding organisms ever ready to attack the unwary and those whose vitality is depressed. General sanitation and cleanliness is our first line of defence against them all. Wherever the conditions of insanitation, dampness, deficient sunlight, and the prevalence of favouring diseases are present there aggressive activity may be again looked for.

[29] Longstaff: Statistics, chap. xix.
[30] THE LANCET, April 15th, 1899.
[31] Newsholme: THE LANCET, Feb. 4th, 1899.
[32] Ransome: Loc. cit.

Address in Surgery:

THE MEDICAL SERVICES OF THE ARMY AND NAVY.

Delivered at the Annual Meeting of the British Medical Association at Portsmouth, on Thursday, August 3rd, 1899,

BY ALEXANDER OGSTON, M.D. ABERD.,
SURGEON-IN-ORDINARY TO HER MAJESTY THE QUEEN IN SCOTLAND; REGIUS PROFESSOR OF SURGERY, UNIVERSITY OF ABERDEEN.

GENTLEMEN,—In presence of an assemblage of so many representatives of the medical science of the British Empire I have much pleasure in gratefully acknowledging the honour of being called upon to deliver the Address in Surgery. It is a task I enter upon with a sense of responsibility and a fear lest I should fail to do justice to the duty entrusted to me by the Council of the British Medical Association. But I take courage from the belief that you will be disposed to form a lenient judgment of any endeavour to contribute to the usefulness of the annual meeting of our association and because I think that the theme I have chosen for the Address in Surgery on this occasion is one in harmony with the high aims of our science, since it has for its design to promote the great objects for which our profession exists, those, namely, of saving the lives and diminishing the sufferings of our fellow men.

A NEW DAY IN SURGERY.

At a time like this one cannot help being strongly impressed by the feeling that the surgical profession in our day has had much given to it and that from it much will be required. We live in an era that can claim to be one of most exceptional, probably unique, interest. We have witnessed in it the most marvellous and rapid advances the world has ever experienced in the powers of mastering and warding off disease. We have passed through many gloomy years, in which we worked our life's work blindly and in the dark, with dread fastening on the heart as surely as the hand grasped the knife, for ever trembling before the horrors of surgical pestilence; and now we have been privileged to see the dawn of a new day when septic disease is being robbed of its terrors by the discoveries of Lister, whose great gifts to humanity coming generations will hereafter delight to recall, recognising that whatever we owe to the great surgeons of the past has been but little in comparison with the benefits he has conferred on us and through us on all mankind. And we may be sure that future ages will be very critical in their judgment of us, the present race of surgeons, and demand to know what use we made of our unparalleled opportunities and whether we went astray amidst all the light that was given us.

THE EFFECT OF LISTER'S DISCOVERIES.

The importance of the period in which we live it would be difficult to exaggerate. For the first time in all the centuries that have flown our profession has changed from a craft into a science—a result that, though many have contributed to it, we owe mainly to Lister. Every progress made in the years of my own professional life seems to dwarf before his great discoveries, and imagination fails to grasp the limits and possibilities of the gigantic revolution which he commenced, or the unspeakable benefits it has conferred, and may yet confer, upon the world. The achievements of the surgeons before his day have now for the first time become fruitful and certain. Fresh fields of relieving and

curing disease have been opened up at every point of our horizon, and in all the busy centres of the earth is springing up a new race of surgeons, who effect as part of their everyday work marvels of cure that even 30 years ago, had anyone ventured to forecast them, would have been looked upon as the dreams of a visionary. It is not merely surgery that has undergone a revolution. The discoveries of Lister are changing the aspects of medicine, midwifery, pathology, and many other provinces of medical science and creating new departments in them; they are as they develop themselves shaping our sanitation, our modes of life, our relations to the lower animals, and even raising questions that may profoundly affect the value of our colonies and dependencies. Year by year their power becomes more widely felt and promises to extend yet further beyond what we can now foresee. But to follow out this train of thought would lead me astray from the practical purpose I have in view. It is, after all, perhaps in our surgical hospitals, where they had their origin, that we witness some of the most impressive effects of Lister's doctrines. These homes of the sick poor have been re-constructed and re-organised in accordance with the principles he taught until nowadays in our own and in all civilised countries the most advanced, the most deeply scientific, the most marvellous and delicate methods of cure are daily practised and placed at the service of our fellow-creatures.

THE UNSATISFACTORY CONDITION OF THE SERVICES.

While in many respects we have good reason to praise the age we live in and the way in which it has availed itself of its advantages no one fully acquainted with the state of surgery in our land can fail to be impressed by the fact that in some quarters the changes and modifications necessitated by the progress of science are even yet meeting with obstacles that ought not to exist, and that some of our medical and surgical brethren are still hampered by systems and restrictions which must be swept away if we are to ensure that none of our fellow-countrymen shall be denied those benefits which are now within the reach of the humblest and the poorest. I venture to believe that in the city of Portsmouth it will not be out of place—perhaps even specially appropriate—to advert to the condition of our army and navy medical services. These, since the surgical world was stirred to its depths 30 years ago by the doctrines of Lister, have been, I fear, gradually falling into a condition that cannot fail to evoke much anxiety regarding their present and future. I believe the causes of this can be more accurately pointed out than has heretofore been possible; I feel sure that by endeavouring to do so here and now more good is likely to be attained than would result from a similar inquiry on any less public or representative occasion; and it appears to me that the present time is suitable beyond any in the past half-century for drawing attention to the reforms that may be necessary to ensure that when the supreme moment arrives the medical departments of these services shall be found adequately prepared to undertake the duties they will be called upon to discharge. We possess at the present moment an enlightened Minister at the head of the War Office to whom we owe it that many desirable reforms have already been introduced into the Army Medical Service. We have also every reason to believe that the trend of public opinion is favourable to such further improvements as may be required in both army and navy. Recent events, too, have demonstrated that we may be unexpectedly called upon to engage with both army and navy in European or even world-wide wars such as would put their efficiency to the severest possible test.

It is moderate and reasonable to expect that the medical departments of the Army and Navy shall be in a condition commanding the respect and approval of the medical profession and the public, that their officers shall be at least as favourably placed in regard to their work as their civil brethren, and that both ashore and afloat they shall be able efficiently to perform their functions in time of peace and fully prepared for the eventualities of war. Yet no observant member of the profession, particularly if connected with one of the medical schools whose graduates used to furnish many candidates to the services of the Army and Navy, can have failed to observe how changed is the estimation in which they have come to be held during the last three decades. The most talented graduates have ceased to aspire to enter them and it has by degrees come to pass that few indeed, and these as a rule of inferior qualifications, can be induced by any means to present themselves at their entrance examinations. Such a one will have noted that those medical officers who possess a few years' experience of the services, however much loyalty seals the lips of most of them and influences all, show themselves disappointed and discouraged with the professional life they have to lead, admit they have made a mistake in entering them, and would gladly, were it possible, sacrifice the years they have spent in them and quit them entirely, even for some comparatively unpromising post in civil life. He must have perceived that many of the most intelligent officers who remain in them are pervaded by a conviction that their abilities have been thrown away and their lives wasted, and that the services are not what they ought to be. He will have followed the continual endeavours made through all these years to remedy their growing want of attraction for men of ability and the failure of these endeavours one after another. He will have learnt that year by year the medical services, especially that of the Queen's army, have become more attenuated and undermanned, so that an undue amount of foreign service, at the cost of health, is entailed on those who enter, and that hence it has become necessary to supplement the deficiencies at home by employing civil members of the profession of a class whose work unfits them for forming officers of the stamp needed in the event of war, even if their other engagements rendered it probable they would consent to be so employed. He may, perhaps, have been told that in the last year or two the post of medical officer in the army has been going a-begging and been hawked for presentation about the various schools and universities where suitable men might be supposed to exist. And, lastly, he may see how, when lapse of years has earned them a moderate pension, many of the medical officers in the prime of their abilities and best working period of their lives hasten to quit the services, but find themselves, save in the instance of a few gifted men, unfitted for any professional activity, so hopelessly have they fallen behind the acquirements of their civil compeers.

THE ARMY MEDICAL SERVICE.

It has sometimes been asserted that, in the opinion of foreign judges, our Army Medical Service is in a state of efficiency enabling it to discharge its duties in a way superior to anything that could be achieved by other countries. One must, however, discriminate. Oft-repeated experience over the very same ground has, indeed, taught us to conduct, in some respects, the medical part of expeditions in the jungles and swamps of West Africa, the deserts of the Nile, or the ravines of the Himalayas in a way that probably no other Power could excel or even equal. Our enemies there are poorly armed and our casualties are few. But it dare not be inferred from this that we are in a condition to deal with a war against a great Power with arms and organisation at least equal to our own, in which large numbers of wounded—thousands instead of tens—must fall to be treated. That would be a most erroneous conclusion and would not be the general verdict of either the civil profession or the ranks of the services themselves. And such of us as possess friends among foreign military surgeons, men of large experience in actual warfare, do not hear from them any such expressions of approval as would warrant very sanguine inferences. It is absolutely conclusive on this subject to recall that last year, when a deputation from the British Medical Association was received by the Secretary of State for War, its members, most of them leading authorities from our universities and medical schools, expressed themselves deliberately to the contrary effect, using expressions which ought to be well weighed as coming from those whose position enables them to form an unerring judgment. An eminent president of this Association there gave utterance to the following ominous opinion: "If there were to come a time of war it is to be dreaded that the horrors which occurred during the Crimea may be repeated." All others present spoke to a similar effect and the Secretary of State admitted that, owing to the condition of the Army Medical Department, "only comparatively inferior men present themselves ..... the best men turning away from the Army Medical Staff ..... a very grave condition of things." With regard to the duties in time of peace it may be contended that these, being chiefly to maintain our army and navy in good health, are efficiently performed in the services, though I need not repeat that even these are at present carried out in the army to some extent by the aid of civil practitioners whose other occupations unfit them for being effective and satisfactory army medical officers. But it must

not be forgotten that this is not all the country expects. The duties of the Royal Army Medical Corps and Naval Medical Service involve preparation for war. This is the chief end of all departments of the army and navy and unless they fulfil that end, no matter how creditable they may be in other respects, they are but a pretence of what they ought to be. In this it must, I think, be admitted that they are in a condition leaving much to be desired. Attendance on minor ailments, trifling complaints, and the few serious diseases and injuries occurring among bodies of men in the prime of their age and health, selected for strength and soundness, and the other routine duties which together constitute the whole ordinary work of the immense majority of the medical officers serving in our forces, form so great a contrast to much that would be expected of them in an active campaign against European troops that comparison between them is hardly possible. They afford the army and navy surgeon, it is no exaggeration to say, scarcely any chance of acquiring the knowledge and skill which would be demanded of him in war.

No surgeon can now, as in former days, rise suddenly out of the ranks of those destitute of special training, however eminent his natural abilities may be. He who is skilled in exercising his profession becomes so by many years of special training. No man who is but theoretically acquainted—be it in ever so perfect a fashion—with the mere doctrines of antiseptic surgery is able to step at once into the arena as a practical surgeon. He must in the first place acquire by slow and painful degrees a familiarity with methods, manipulations, and procedures built up of a multitude of little details. It takes him many years to acquire these by practice, by training himself alongside of those to whom they are already familiar, by the discipline of his own failures, and by a study and familiarity which eventually imprint them so deeply that they become a part of himself and are carried out instinctively and unerringly under all ordinary conditions, as well as in the unusual events and emergencies that continually arise in so many of the cases he treats. Septicity is an enemy of infinite variety not to be combated with success by theory alone or by wielding a single weapon; the modern surgeon must be armed at all points both for offence and defence, and acquaintance with his weapons and their powers is not attained save by a long course of study and training. Even after the ordinary practice of surgery as nowadays carried out has had its foundations laid by a training in antiseptic and aseptic work the greater part of the education of the skilled surgeon has yet to be acquired. The methods of cranial, thoracic, and abdominal surgery are necessarily, to meet the varying circumstances, so numerous, so intricate, and demand so great intellectual and manipulative skill that only one who has spent years in constantly improving himself in them, whose mind has been fashioned by long experience and study of the problems he daily meets, and whose hands have gained by constant usage the technical facility and delicacy indispensable to success can with impunity venture into these territories with the requisite boldness and confidence and ensure the successful results which alone render these procedures justifiable. Such is the life-long training of the skilled surgeon of our cities and hospitals who carries out the marvellous methods and obtains the wonderful results of modern surgery.

[Dr. Ogston here said that a standard of work at least equal in excellence to that of the civil surgeon ought to be expected of army and navy medical officers, but that, on the other hand, there were very few institutions where these officers had the opportunity of practising surgery. He continued:—]

These defects tend to their own perpetuation. Save in the case of a few exceptional men, medical officers trained under such conditions must by the time they reach the higher ranks, where they possess to some extent the power of introducing reforms, necessarily have become so unfamiliar with the progress their science has been making, and so unaware of what ought to be done in the way of modernising the services, that we cannot wonder that they should be slow to move in the direction of effecting the necessary changes. Again, though numbers of the best men in our profession are in the ranks of the services, and many there carry out work of the highest order, it is nevertheless true that such men exist in them, not owing to their opportunities and encouragement, but in spite of them, and have become what they are owing to intellectual forces within themselves which in any other line of life would have ensured the highest eminence and the greatest success. And it is unfortunately the case that the standard of acquirements of the successful entrants into the Royal Army Medical Corps of the last series of years has been such as to compel the belief that the proportion of eminent men is already becoming less than it has hitherto been and that the service is undergoing rapid deterioration. In considering the requirements of the services I have not overlooked that, along with purely surgical work, a very large amount of medical and sanitary duty falls to be carried out by the medical officers in the event of war; but time does not permit of everything being elaborated and my standpoint being chiefly surgical I must limit myself to saying that for these also the opportunities of practice in peace are not such as they ought to be and that the causes of this are similar to those stated regarding the purely surgical aspect of the services.

CAUSES OF DISCONTENT IN THE SERVICES.

The present system has had a sufficient trial and, in spite of all attempts to amend it, has yielded unsatisfactory results, mainly owing to the deficiencies indicated. The Royal Army Medical Corps and Navy Medical Department, indeed, are at present existing under impossible conditions; they cannot be subjected to such impediments without their effects being felt in a hundred ways. They are in a state of internal discontent from the consciousness of being seriously defective somewhere. Their members realise that they do not possess the same privileges of professional occupation as their civil *confrères* and are sensible that they are not equipped as they ought to be in following out the intellectual problems to which they have dedicated their lives. This is perceived not only by themselves but by others, especially by the other scientific branches, and naturally they do not enjoy the same appreciative esteem as is accorded to departments engaged in the constant healthy exercise of all their due activity, and possessing the internal vitality and self-respect resulting from conscious advance in the exhilarating race of intellectual progress which forms the very life of the leading professions in the world's foremost nations. It is certain, too, that the same cause underlies what has often been complained of—namely, the cold regard paid by the military and naval authorities to the medical services, their lack of appreciation of them, the way in which they are starved in their pecuniary requirements, and the fashion in which their exercise and training during peace are overlooked and neglected. They would seem to be considered as less deserving of development than even such departments as the commissariat and transport—the contemptuous belief being apparently held that trained surgeons to attend the wounded in war can be summoned into the field at a moment's notice by the expenditure of so much money, like the horses, mules, and camels which an army requires.

THE ARMY MEDICAL SERVICE UNDERMANNED.

This condition of things is one from which there must some day be a rude awakening. It may be true that in former days an army medical service could be so extemporised but it is so no longer. The Army Medical Corps ought to be made, what it at present is not, a complete and perfect entity, fully equipped with everything needful and regularly trained like any other department. If it is to furnish the priceless service for which it exists it must be fully manned, the members composing each of its units must be accustomed to work together, so that their duties are familiar and can be promptly performed, and the whole of its equipment must be prepared in time of peace for instant employment in war. Instead of this we have a department so starved and undermanned that, as the Under Secretary for War recently admitted, in the event of a war breaking out requiring the employment of two army corps we could not supply them with the requisite medical contingent. Let me give an example of how the Army Medical Service worked in an expedition of some 11,000 men, sent under Sir Gerald Graham to the Eastern Soudan and landed on the Red Sea littoral in 1885. Following as it did on the death of Gordon at Khartoum, when the country was roused into excitement, many millions were spent upon it and it was furnished with everything, even to hospital ships, at profuse expense, nothing being wanted to its medical department that money could supply or care provide. Yet in the bearer companies the men were from Aldershot, the carts and harness were from Woolwich, the mules and muleteers were from Spain, dhoolies and

dhoolie-bearers were from India, and camels and camel-drivers were from Aden. The waggons arrived in one ship, the harness in another, the mules in a third, and all at different times. When the ambulance waggons were landed, along with several carts, the pieces were mixed up, and the men had to fit them together as best they could. When the mules and harness turned up it was found that while the waggons were made for one kind of draught the harness was made for another, and so on. And the officers, non-commissioned officers, and men knew nothing of one another. For the medical part of the expedition generally the stores came without storekeepers and without proper outward indication of what the packages contained. Chaos reigned, and I am assured that if there had been an engagement on the day the forces landed there would not have been a bandage forthcoming for the wounded. And very much the same state of matters exists in the service to-day. To manage in this fashion is simply to ensure when a critical time occurs a repetition of the scenes of the Crimea where admirable medical officers were made a sacrifice by the war authorities to appease the public indignation excited. A system that produces such results stands self-condemned and none who remember the Crimean War will consider any efforts to prevent a repetition of like experiences ill-timed or unadvisable.

So complex an organisation as the Royal Army Medical Corps ought to be kept in a high state of efficiency and be vitalised by continual practice. It ought to consist of separate units, each complete in itself and familiar with its equipment and work. Each field hospital should be completely furnished and frequently practised in its duties. Every corps should be ready to act, as in other departments, the moment it takes the field, and not have to learn its duties there when the day of trial comes in a campaign. Whether stationed at home or abroad, the officers should be provided with all the proper means of keeping themselves informed regarding the advances that are for ever being introduced into their science. The literature bearing on every new progress should be supplied to them at remote stations where scientific periodicals and books are not found; for no medical officer can from his pay purchase and transport a library of the newest medical works, even if he were aware, which he often cannot be, of what he ought to procure. The want of all these things prevents the due development of the services and there can be no reasonable hope of a better state of matters until they are remedied. But were the reforms which naturally suggest themselves carried out, who can hesitate to believe that new life would be infused into them? The best graduates would once more flock to and remain in them, and the country would not be placed in the dreadful position of having to pay with the lives of its bravest and best for the state into which its medical services have been allowed to drift.

THE INDIAN MEDICAL SERVICE.

It is not necessary to enter into many details concerning the Indian Medical Service. To some extent it shares in the defects of the Queen's service; but opportunities of professional work are more frequent, two-thirds of its officers being engaged in civil work; and it therefore affords a professional training that places it in a much better position and approximates it in some degree to the condition of continental army medical services. Its comparative popularity is a strong corroboration of the remarks I have just made, for it attracts the best graduates of our medical schools, so that the weakest men who enter its ranks are of a class superior to the best who enter the Royal Army Medical Corps.

THE MEDICAL DEPARTMENT OF THE NAVY.

The medical department of the navy, on which I have already partly touched, has, no more than the army, kept place with the advance of the times; it still preserves an organisation that may have answered its purpose well enough in the first half of the present century, but is inadequate to meet the requirements of to-day. In it, as in the army, the fundamental error is perpetuated of adhering to a system whereby its officers, shut out from practising their profession as civil surgeons have to do, fall year by year more out of touch with the advancing requirements of science and necessarily fail to familiarise themselves with what will be their great duties in the event of a naval war. Treating none but the healthy and strong in time of peace, their opportunities of dealing with wounds, and especially with the higher branches of surgery are as good as non-existent; and they cannot by any possibility, as things are, acquire the skill everywhere possessed by surgeons engaged in civil work, but which would in war be equally demanded of them. Such as it is, their work has to be carried out under arrangements that seem deliberately calculated to render the practice of antiseptic or aseptic surgery impossible, in rooms without antiseptic materials, irrigators, or sterilisers, and with a limited armamentarium of instruments provided even at the present time at their own expense. Proper diagnostic instruments and apparatus do not exist among them; even the surgeons in the best equipped vessels and stations are left destitute of the facilities that are wanting in hardly a single civil hospital or dispensary for the poor throughout the length and breadth of the land. Nearly all that has already been stated regarding the Royal Army Medical Corps is at least equally true of the Naval Medical Service, but to enter *seriatim* into these matters again would be an unjustifiable waste of time. More than the army the navy requires the touch of a reformer's hand. I should be sorry to use any word that may give needless offence, but I am forced to say that, even on board the most modern ships of war, a comparison of their surgical outfit and arrangements with the varied armamentarium and the conditions of work of the civil surgeon tends to evoke a vision of the knight of La Mancha equipped in his great-great-grandfather's suit of armour. When we consider what the medical officers of the navy may at any moment be called upon to do and their vast importance to the country we feel that they, of all others, ought to be almost lavishly supplied with the best facilities for work, with instruments and apparatus of all kinds, instruments for special diagnosis, instruments for special operative procedures, endoscopes, electrical instruments, radioscopic apparatus, sterilisers, and apartments where antiseptic and aseptic surgery can be practised, and have reasonable opportunity in time of peace of familiarising themselves with their use. The highest care should be bestowed on fostering the British of all the naval medical services in the world, and we can scarcely believe that this is not done.

[Dr. Ogston here suggested that the smaller vessels of war which have no surgeon and few surgical appliances should carry several men fully instructed in First Aid. He also recommended that Lord Lansdowne's Central British Red Cross Committee should make an endeavour to attach some of the most capable civil surgeons to the Royal Army Medical Corps. He continued as follows:—]

MEDICAL SERVICES OF GERMANY.

Although the arrangements of foreign services cannot be directly adopted in our own much which is instructive may be learned from the medical services of Germany, where, of course, compulsory service exists. In that empire every medical man who has served possesses a fixed military rank, even if engaged in civil practice, and is liable to be called upon to serve where and when required. Those who have not served in the regular army but are in private practice receive annually an inquiry addressed to them by the War Office as to whether they are prepared to serve their fatherland in case of war. Every German medical man who has served in the army at all is maintained for 19 years under military orders—that is, he possesses a fixed rank and is allotted, even in time of peace, a known military post which he would occupy if war broke out. Thus the university professors hold high military rank corresponding with their eminent civil position and scientific attainments, and are required to give annual courses of instruction to the medical officers serving in the army or navy. Such well-known surgeons as Bergmann, Bruns, Trendelenburg, and Mikulicz have to teach these classes during the Easter holidays so as not to interfere with the winter and summer sessions of the universities. Each professor has his fixed military rank assigned to him in case of war; most of them rank as lieutenant-generals, some as generals, and even higher, and in the event of war they act as consulting surgeons to the medical officers of the army in the field or base hospitals. They receive the same pay as the military surgeons, as do also the other surgeons who are liable to be called out in case of war, and some of the latter have places assigned them in the sanitary corps, &c., so that their skill and experience are utilised in every department of the service. In time of peace German army surgeons have the development of their professional culture ensured by the following measures: the most

promising surgeons and assistant surgeons are sent to do duty for a year at a time in the medical, surgical, and gynæcological departments of the hospitals connected with the universities and in other large public hospitals unconnected with them. The junior and assistant surgeons are also annually sent to attend the special courses of instruction in anatomy, surgery, and operative surgery mentioned above. The senior medical officers, nearly corresponding with our surgeons-major, at least the most competent and promising of them, have to serve in rotation in the large military hospitals in which are treated not merely soldiers but all kinds of ordinary patients; there they have to act as teachers and attend and take a share of the tutorial work among the pupils in the classes of the various professors; or they may be sent to do duty for a year in the general hospitals not only in the surgical but also in the medical and gynæcological wards. They have also to attend as they may be ordered annual courses of bacteriology, or they may be furnished with funds for travelling in other countries and studying their medical and sanitation arrangements. All surgical instruments and appliances in the German army are provided by the State and in their navy this is likewise the case; every hospital in which the medical officers serve has its complete armamentarium provided for it so that no unwise economy hampers the most thorough and modern practice of the healing art and the same thing is true in regard to their naval medical service.

MEDICAL SERVICES OF RUSSIA.

In the Russian army and navy similar care is taken of the professional culture of the medical officers. Russia possesses six large and 300 small hospitals connected with the army besides smaller lazarettos; and in some of these the equipment is far in advance of anything the services possess in this country. Thus the military hospital of St. Petersburg, wherein are treated all medical, surgical, gynæcological, ophthalmic, and other diseases, consists of five separate clinics or infirmaries, each of which is complete in itself and possesses departments for every class of disease and even wards for paying patients. The wards are excellent and replete with appliances of every kind; and there are bandage rooms, purifying rooms, operation theatres, bacteriological departments, rooms for physical research, laboratories for teachers, and laboratories for students, all excellent and complete. Each clinic possesses 850 beds, 120 of which are for women's diseases and 20 for children's; and about 45,000 patients are treated per annum. In these clinics the students and assistants have to work in the most thorough manner and study every kind of case. The hospital possesses a staff of 34 professors, 70 *privatim docentes*, and 47 assistants. Each department is furnished with an ample annual allowance for instruments and apparatus and can apply for and obtain additional grants for anything more that is required or for anything new and expensive. They have liberal provision of everything calculated to assist the most advanced work and investigation—x-ray rooms, photographic rooms, electrical rooms, immersion lenses, centrifuges, &c., to an extent that excites the marvel and envy of British visitors. The work in the wards, such as case-taking, temperature-recording, and every sort of examination and study of the cases, is of the very highest character, and the operations and dressings are carried out by the surgeons and qualified assistants in a fashion that is above praise.

Russia has 3000 surgeons in her army and any of these may, if he show ability and powers of work, obtain an order to return to study in the hospitals for a period of two years. There he has to work as a regular assistant and on proving his capacity may attain a place among the teachers of the institution, or he may be transferred to the hospital of some provincial city and there continue to perfect himself in his profession and further qualify himself for his duties in time of war. The Russian naval hospitals are arranged like their army hospitals; they exist in many parts of the empire, there being five large ones at different ports besides one or two smaller ones; they admit civil cases of all kinds and in them the medical officers possess opportunities of training themselves in all manner of high-class professional work. In the Russian navy the medical officers who show ability can obtain permission to return for two years to the hospitals and can there advance by merit, 10 every year, to become *privatim docentes* and so proceed to the position of professor; and they have the same privilege as those of the army of obtaining after 10 years' service two years of study leave in the hospitals and schools, during which time they are granted extra pay. The Russian State supplies its army, its navy, and their hospitals with instruments of the newest construction, embracing appliances for special diagnosis and treatment; the operation instruments, and even the boxes that contain them, are arranged so that they may be readily sterilised by heat or otherwise; and Schimmelbusch's sterilisers and apparatus specially constructed for carrying out antiseptic and aseptic treatment under the difficulties of a campaign are supplied with them. The drugs are prepared for the services in the form of tabloids with the active principles accurately dosed and made up by the newest machinery. Dressings, bandages, and such like are prepared, sorted, made up, sterilised, and sent up from factories which are ideals of purity, ingenuity, and care in a way that is an example to the world.

MEDICAL SERVICES OF FRANCE.

In the French army post-graduate courses expressly for medical officers are conducted by professors at the different universities throughout the Republic and the cost is borne by the Army Medical Department, while a certain number of the medical officers of the active and reserve army are every year ordered to attend them, extra pay being drawn by those who do so.

A SCHEME OF REFORM.

But enough has been said to show that we have much to learn from foreign countries; that unless we follow their example our officers, soldiers, and sailors who may be wounded in war will be attended to in a very imperfect fashion compared with those of other European Powers; and that our services stand in need of great reforms which must be more or less of the following nature. It would, first, be a great advantage to the services were a section created for military and naval surgery at the annual meetings of this Association in which all professional matters connected with them could be discussed and where all communications should be privileged. There can be little doubt that the responsibility for the defects of the services chiefly lies in the apathy and ignorance of the civil part of our profession regarding them, and this is the first thing that should be remedied. Such a section would furnish instruction as to the actual state of matters and what amendments are required, and by its agency the profession and public would be educated to obtain them. Reforms so initiated and urged on the authorities by the Association could not fail to be quickly introduced. In such a section also questions of ambulance, transport, equipment, wounds, and subjects of a kindred nature would be perennially dealt with. And special work by medical officers would secure due publicity and appreciation. Information as to the condition of the services should be laid before the War Office and Admiralty and the necessary reforms urged upon them in all proper ways in order that their organisation and equipment may be modernised. The War Office in particular should be induced to carry into complete effect the system initiated when the regimental system was abolished. Medical provision should be made for three complete army corps. This if it exists at present is a mere framework on paper, of no real use in so complex a machine as the Royal Army Medical Corps. The number of those who are to serve when war breaks out should be completed, the equipment and materials should be ready and at hand, and men and officers frequently trained in their use. Field hospitals should have their equipment complete and their staff attached to them. And the whole service should be organised as a body of independent units, capable of acting alone or being combined or brigaded as required. Everything belonging to each unit, even to its transport, should be complete and under the command of its medical officers. This would give the military authorities a medical corps on which they could always depend, out of which they could be supplied with such a proportion of units as the particular exigency required, to be distributed where and when they were called for. Such a system would throw responsibility for the adequacy of medical arrangements on those in command, and we should no longer have the Army Medical Corps bearing on its shoulders a vicarious load of sins whenever a general—to use a terse vulgarism—miscalculates the size of his butcher's bill.

INSTRUCTION OF OFFICERS.

The most clamant of all reforms is provision for the proper instruction of officers in their war duties. It is the climax of

unwisdom to deny them this and not until it is fully conceded can the services regain their lost popularity and attract such graduates as will provide the number and quality of medical officers the country requires. The principle of study leave has been conceded but cannot be carried out in a service too undermanned to do its work. And the amount conceded is, in my opinion, far too little to enable medical officers to keep pace with the advances of science. I cannot put too strongly the absolute necessity for at least one out of every five years of service being devoted to this. Were every meritorious officer, especially if he have been stationed abroad, set free to devote every fifth year or its equivalent during the first 20 years of his service, or up to 45 years of age, to visiting and participating in the work of military, naval, and above all civil hospitals and schools of medicine, much would be done to ensure his possessing the skill in the higher methods of surgery and medicine to which he and those under his charge are entitled to lay claim. In this we should be but adopting what has been found indispensable by other European powers. Officers receiving study leave should be sent to act as assistants, residents, and house-surgeons and physicians to our hospitals and schools of medicine, in the same way as our younger graduates who are in training for the highest places in the civil profession. Officers from the services would be cordially welcomed in such institutions, where men of their stamp are continually in demand. There exist, besides, numberless infirmaries throughout the country unconnected with schools of medicine, where most excellent surgery is being daily done in which they would be received with open arms and welcomed to take a share in the work. It is often most pitiful to see our graduates in the services returning to the schools where they were trained, longing for, and acutely feeling, the need of such work and practice, who, under existing arrangements, can only hang about for a few days and look wistfully on under every discouragement of their natural aspirations, till they have to turn away hopeless of obtaining the privilege of mixing among the workers and training themselves in the refined surgery of to-day.

DEVELOPMENT OF HOSPITALS.

It is of the most vital importance that the development of military and naval hospitals should at once receive the attention of the authorities. The services can never be what they should until their hospitals and lazarettos, both at home and abroad, are multiplied, improved, and cherished into new life and activity. They should, wherever it can by any possibility be done, be thrown open for the reception of ordinary patients from the civil population and for the admission of diseases of all kinds. The number of medical officers in charge of, or serving in, them should be largely increased and they ought to be provided in them with fully the same opportunities as are enjoyed by their civil brethren. No more deadly injury has ever been done to the medical services than by starving and neglecting their hospitals. They are the heart of the services and it is necessary that the authorities should be brought to recognise that this is so and follow the wise examples set by foreign nations.

HOSPITAL SHIPS.

I cannot believe it possible that the medical arrangements on board our ships of war should be permitted to continue in their present state. The succour of the wounded in a naval action is no doubt a question of very great difficulty on board ship and no considerable alteration of the existing distribution of space can be claimed with any hope of its being conceded. But, without going so far as this, it is the duty of the State to provide those who shed their blood in its defence with suitable special accommodation in as safe a situation as possible and to see that those in charge of them are furnished with every material, appliance, or instrument that can lessen suffering or confer an additional chance of saving life. Other Powers are more generous and wise and a nation depending on its navy as we do cannot be pardoned for such suicidal economy. New discoveries may possibly some day alter the conditions of naval warfare, but in the meantime it seems unlikely that any great change can take place in the general character of our fleets and warships and a considerable naval action would certainly at present furnish such a mass of wounded men as might defeat the best efforts of the Naval Medical Service to cope with. The only means of doing so, and one so obvious that it is a marvel our country has not long since adopted it, is to provide every fleet with a certain proportion of fast steamers, without armour or armament, flying the Red Cross flag, fitted up with wards, operation theatres, and dressing rooms, anæsthetic, sterilising, and apparatus rooms, officered by a staff of surgeons and attendants, and in every way imitating the arrangements of the best civil hospitals. These should form as essential a part of every squadron as do the bearer companies and field hospitals of an army. Their duty should be to dash to the aid of ships disabled or out of action or the moment the conflict was over; and, with the help of their trained attendants and the best forms of slings, litters, and barges, remove the wounded to the protection of the Red Cross and render them the same attentions as those given in like straits to the injured and wounded in the army or in civil life. The cost of such vessels would be small compared with ships of war and the good they would achieve in great naval engagements and even in ordinary times would be unspeakable. I am glad, since this was written, to perceive that the Peace Conference at The Hague has occupied itself with this question and is endeavouring to secure such vessels being treated as neutrals. But even if the Conference fail to procure their neutrality it will not make it the less our duty to provide such vessels in the navy.

CIVIL AID A BROKEN REED.

It is necessary also to make strenuous war on one of the most serious obstacles in the way of obtaining the reforms required for perfecting the services—namely, the tendency on the part of the military authorities to believe that deficiencies in them can at any time by the power of money be compensated by engaging civil aid. No more erroneous idea could possibly exist, as those who are acquainted with its working well know. The civil aid at present employed in various stations throughout the country is of an inferior quality and could not, even such as it is, be made use of in war to any extent. The medical men who fill these substitutive posts, as well as those who would volunteer to aid in active service, are not the skilled and trained class who could be entrusted with the difficult surgery of gunshot wounds. The urgency of the situation has driven some to suggest that, should need arise, the duty of attending part of the wounded and convalescents could be discharged by existing civil institutions. This could never be the case to any extent; neither their accommodation nor funds could be made applicable to such purposes save in the event of a dangerous national crisis. The country and the heads of the services must be brought to recognise that voluntary aid, even such as that proposed to be organised by the Central British Red Cross Committee, cannot provide the class of medical officers required unless that organisation were to be developed at great cost into a second army medical department, which would crush the present one out of existence without being itself fitted to take its place. The fatal error of imagining that the Army Medical Corps can be supplemented by civil aid is one that has already done infinite harm; it has been made a constant pretext for hindering the due development of the services and producing the defects of which I have spoken, and is a mischievous delusion that cannot be too strongly combated. Were such a proposal made regarding any other scientific department, such as, say, the Royal Engineers, its absurdity would be at once perceived; but so little is the peculiar position of military surgery known to the laity that it passes as being reasonable among many without, and some even within, the limits of the medical profession. At its best it is but a poor palliative, but can never be a cure.

FALLACIES AND FACTS.

It is conceivable that some may be found, even in the services themselves, who contend that they are not in so unsatisfactory a condition as I have painted. They can point to good work done in them but yesterday, to individuals in them whose admirable labours or brilliant achievements are well known to us all, and to evidence that special institutions or special expeditions are provided with many of the latest appliances for scientific diagnosis, treatment, or research. It would be wrong to deny, or grudgingly and unfreely to admit, these facts—to overlook the enlightened, devoted, and admirable work, or the talents and valour of numbers of our brethren in the services, or to minimise the efforts of those highly placed in them to maintain and elevate their standard. I should be very sorry to seem to do so. But let those who hold that all is well with the services visit the hospitals, depôts, ships, and stations of the army and navy and see with their own

eyes the circumstances under which the surgeons have to work now and would have to work in war. Let them contrast their equipment with that of our civil hospitals, even of our minor country infirmaries. Especially let them study the military and naval arrangements of other countries and realise the full and energetic professional life enjoyed by the medical officers of the best European Powers. They will then find no escape from the conviction that our present system is most seriously at fault, and that, without recognition of this and its timely amendment, our country will have its eyes rudely opened when the strain of war shall arrive, and the test of facts unfolds the lamentable revelation of how unfitted the services are for their great and real work. I have given sufficing reasons why I and many civil surgeons feel unable to agree with those who take a hopeful view of the condition of the services and have striven to show that there lies before us a struggle of no small magnitude to be gone through ere we can expect to do so.

ON SOME STRUCTURAL VARIETIES OF THE ENLARGED PROSTATE RELATIVE TO ITS TREATMENT.

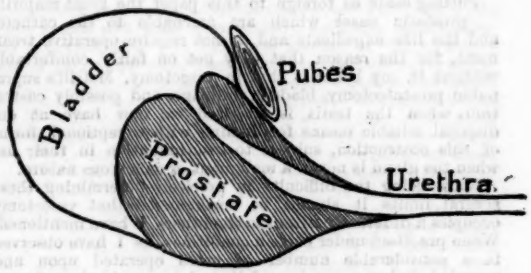
BY REGINALD HARRISON, F.R.C.S. ENG.,
SURGEON TO ST. PETER'S HOSPITAL.

THOSE who have carefully watched the developments which have taken place in the treatment of hypertrophied prostate must have been struck with the variable results which have followed and the different opinions which are held in reference to them. In my Bradshaw Lecture in 1896 when dealing with this point I ventured to say that if vasectomy and castration in relation to prostatic enlargement had done no more than direct attention again to its pathology they would have served a useful purpose. Within a comparatively short period the following methods have all been submitted to considerable trial: (1) prostatotomy, or division of the floor of the gland from the perineum, much on the same principle as an external urethrotomy or perineal section is performed; (2) paracentesis or tapping of the atonic or unemptied bladder through the hypertrophied prostate, followed by drainage; (3) McGill's suprapubic prostatectomy; (4) castration; and (5) vasectomy. As I am in some degree responsible for three of these—viz., No. 1,[1] No. 2,[2] and No. 5[3]—I have naturally watched the course of events with more than usual interest and I have taken considerable pains to follow out the subsequent history of many of the patients submitted to these various methods of treatment.

Looking back at the experience which has thus been gained and the successes and failures which have followed I do not think that there can be much doubt but that the failures are mainly due to the somewhat indiscriminate application of the process which happened to present itself at the time. The more recent experience connected with castration and vasectomy appears to add force to this conclusion and to indicate on further reflection that there are many variations with broad distinction in what we are accustomed to speak of, somewhat generally, as the senile or hypertrophied gland. To appreciate this more fully we have only to go to a museum of pathology or, if further proof is required, to study living examples as they are furnished by the surgical examinations which are necessary for the purpose of remedying diseased conditions of the bladder arising out of urination being seriously obstructed by the prostate. With so much variety in the same genus it is unlikely to suppose that we shall find a single process of cure applicable to all the sub-orders any more than we could logically expect it for herniæ or for the various forms of benign enlargement which the female breast may present. I have now passing before my mind at least three distinct and not uncommon forms of enlarged or hypertrophied prostate as met with in elderly men to which I will briefly refer for the purpose of illustration.

First, enlargement mainly proceeding from blood engorgement more or less chronic in its nature, where the prostate is assimilated with some of the characteristics of an erectile structure as observed in the penis and elsewhere. This condition may explain some of the nocturnally recurring symptoms which characterise the earlier developments of prostatic hypertrophy. When seen in the course of a suprapubic exploration of the bladder the projecting lobe or lobes with the internal meatus of the urethra on the upper surface sometimes resembles the glans penis in a very congested state (Fig. 1). Secondly, the fibrotic prostate where the

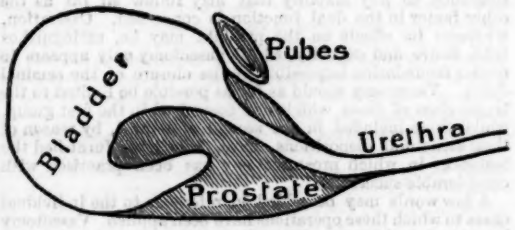
FIG. 1.



Common form of prostatic enlargement.

enlargement ultimately takes the shape of a pedunculated mass or masses of degenerated connective tissue and muscular fibre, with but little in common in structure with the preceding variety. In this condition the symptoms are usually those of much local irritation not unlike what a stone excites (Fig. 2). Thirdly, where the enlargement of the prostate

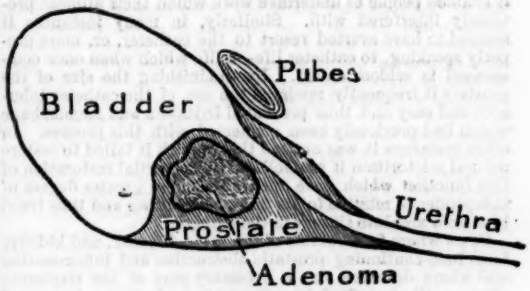
FIG. 2.



Pedunculated prostate.

may be said to be self-contained and consists of an almost isolated mass of prostatic tissue resembling an adenoma[4] which, like the kernel of a nut, easily shells out and can thus be enucleated (Fig. 3).

FIG. 3.



Adenomatous prostate.

What analogy, would I ask, pathologically or surgically, is there between these three conditions other than that at one time they each represented a healthy prostate? Or, what common feature do they present for the employment of any one special method of treatment, hitherto discovered, besides the liability from the size the prostate may attain, to obstruct micturition and so to render the use of a catheter necessary?

[1] Transactions of the International Medical Congress, Copenhagen, 1884. [2] Brit. Med. Jour., 1881, 1882. [3] Ibid., 1893.

[4] Transactions of the Royal Medical and Chirurgical Society, vol. lxv

What good would be likely to accrue if the patient suffering from the greatly engorged prostate were submitted to a suprapubic prostatectomy, with the risk of hæmorrhage and an incomplete removal which under these circumstances would thus be incurred? Or, in the other instances I have taken, what would probably result if the patient with the adenomatous-like obstruction were vasectomised or the one with the pendulous fibroid or fibroids were castrated? Practically *nil*. The published experience of the last five years relative to the several operations just referred to is sufficient to suggest answers to these interrogatories.

Putting aside as foreign to this paper the great majority prostatic cases which are amenable to the catheter and the like expedients and do not require operative treatment, for the reason that they get on fairly comfortably without it, my belief is that in vasectomy, McGill's suprapubic prostatectomy, bladder drainage, and possibly castration when the testis is diseased we now have at our disposal reliable means for dealing with exceptional forms of this obstruction, subject to discrimination in their use when the gland is not of a malignant or cancerous nature.

Recognising the difficulty in precisely determining these several limits it should be remembered that vasectomy occupies a different position to the others I have mentioned. When practised under certain conditions, as I have observed in a considerable number of cases operated upon and recorded, it has never been followed by any kind or degree of harm, so far as I am aware.[3] Together with this it has seldom failed to relieve the patient though not always to the same extent. When this has been the case it was for reasons, I believe, such as have already been indicated and then it left matters either *in statu quo* or open to any other course that seemed advisable. The same cannot be said in respect to other operative expedients of this nature. These measures, however, will be demanded by the urgency of the strain on the urinary system relative to micturition, without reference to any inability that may follow so far as the other factor in the dual function is concerned. Castration, whatever its effects on the prostate may be, extinguishes both desire and capacity, whilst vasectomy only appears to render fecundation impossible by the closure of the seminal ducts. Vasectomy should as far as possible be limited to the larger class of cases which are comprised in the first group, whilst those included in the second and third, by reason of their structural dispositions, have, I believe, furnished the instances in which prostatectomy has been practised with considerable success.

A few words may be added in reference to the individual cases to which these operations have been applied. Vasectomy has been largely successful in diminishing vesical irritability whether associated with catheter life or not. Hardly an instance was observed by me where this was not the case. Thus, it constantly happened that the necessity for using the catheter became less frequent after it and the patient was able to obtain sufficient and continuous rest and sleep. Further, it was found, particularly in old hospital cases, that it enabled people to undertake work which their ailment previously interfered with. Similarly, in many instances it seemed to have averted resort to the catheter, or, more properly speaking, to catheter life—a life which when once commenced is seldom ended. By diminishing the size of the prostate it frequently rendered the use of the catheter tolerable and easy and thus prevented irritation and hæmorrhage which had previously been connected with this process. In other instances it was noticed that though it failed to restore natural micturition it was followed by a partial restoration of this function which gave the individual a greater degree of independence relative to his daily occupations and thus freed him from absolute slavery to the catheter.

Cases where fœtid states of the urine, bladder, and kidneys from long-continuing prostatic obstruction and inflammation and where drainage was a necessary part of the treatment often greatly benefited by suprapubic cystotomy. In several of the latter a removal of a portion of the large prostate which had become fibroid was successfully accomplished.

The following case is one that illustrates the points I desire to give some prominence to in this paper. It was that of a man whose vasa I divided early in 1894. He was 64 years of age. He had great irritability of the bladder, was entirely dependent on his catheter, which he used a dozen times or more in the 24 hours, and his urine was offensive and purulent in spite of careful irrigation. He derived so little benefit from vasectomy that after waiting three months and thinking that he might have an encysted stone somewhere behind his prostate I opened the bladder for exploration above the pubes. All I found was a pendulous fibroid connected with the third lobe of about the size of a small pigeon's egg which I readily twisted off (*vide* Fig. 2). Drainage was continued for 10 days and the wound readily closed. The patient made a good recovery. When I last saw him, about 12 months ago, he was very well and active and could expel the larger quantity of his urine spontaneously. His bladder was tolerant and though he could not empty it completely he had not found it necessary to pass his catheter more than once in the 24 hours since the operation and this he did quite easily. He had for a long time given up washing out the bladder as the urine was quite normal. This was a typical case for suprapubic prostatectomy occurring in a well-preserved man in vigorous health and where a pendulous outgrowth from the prostate was tormenting him just as a stone would do.

Lower Berkeley-street, W.

[3] Selected Papers on Stone, Prostate, and other Urinary Disorders. Churchill, 1899.

THE ORIGIN OF ANTITOXIN: IS IT PRESENT IN THE BLOOD OF SOME NORMAL ANIMALS?

BY L. COBBETT, M.D. CANTAB., F.R.C.S. ENG.

(*From the Pathological Laboratory, Cambridge.*)

I.—*The Mode of Action of Antitoxin.*

LITTLE by little the mystery which surrounds the origin of antitoxin is being revealed; but the fundamental question whether it is a bacterial product or a secretion of the cells of the living animal is not yet disposed of. The former of these hypotheses is, however, losing ground. On the one hand, it has not been found possible to produce antitoxin directly from toxin by means of the action of various micro-organisms,[1] by heat, or by chemical agents, and the attempts of Smirnow[2] to do so by electrolysis have not proved convincing; for though electrolysed cultures of the bacillus of diphtheria have been found to possess curative properties their action is feeble compared with that of true antitoxin, and is, moreover, possessed in equal degree by other substances. On the other hand, the suggestion put forward by Ehrlich[3] in 1897 that antitoxin is of the same substance as those portions of the protoplasm of certain cells the possession of which is the very cause of their susceptibility to the action of the poison, not only affords a satisfactory explanation of previously known facts, but has received strong support from direct experiments.

When one considers what is the mode of action of poisons in general one is led to believe that they act in a chemical manner upon some constituent of the animal body. Some, may be, have a strong attraction for water only and destroy tissues by robbing them of this fluid; others may possess an affinity for some more special cell-constituent—one which is present in certain organs and groups of cells only. Some observers think that this chemical action results in the formation of a compound which is the real poison. Such may, of course, occur, but if it does it affords no complete explanation of the action of the poison in question, for the action of the new poison has still to be considered. Another possibility presents itself—namely, that the ultimate action of a poison is due to the molecular shock within a living cell which takes place when the poison enters into chemical combination within it with one of its constituents—an action which, as Mr. H. E. Durham has suggested to me, may be illustrated by the breaking of a glass vessel when sulphuric acid and water are mixed within it. If this be the true explanation of the action of any poison, we may conclude that an animal would be susceptible to it only on the condition of its possessing in certain of its cells some substance capable of combining with that poison. The

[1] Metchnikoff: Annales de l'Institut Pasteur, Paris, 1897, tome xi., p. 801.

[2] Berliner Klinische Wochenschrift, 1894 and 1895; Centralblatt für Bakteriologie und Parasitenkunde, Jena, Band xxi., S. 621.

[3] Die Wertbemessung des Diphtherieheilserums, Abdruck aus dem Klinischen Jahrbuch, Jena, 1897.

administration of small quantities of the toxin to a susceptible animal would neutralise more or less of this hypothetical cell-constituents and so disturb the physiological balance—which according to Weigert is maintained in every cell—and lead to the reproduction of the wanting part. This reproduction tends to be carried to excess. So that the result of repeatedly injecting small quantities of the toxin would be to cause an increase of the substance in question. The presence of an excess of this substance *in its parent cells* would, of course, lead to increased susceptibility on the part of the animal which owned them. (A greatly increased susceptibility to tetanus toxin may, according to Behring,[4] occur in animals which are being immunised to that substance; and Fraser[5] makes a similar statement about animals which are treated with snake poison.) But when it had been cast out into the blood-stream it would there be a cause of immunity, for it would be capable of neutralising in a safe place any poison which might be on its way to more delicate susceptible structures. Such, as I understand it, is Ehrlich's view of the origin of antitoxin. Those portions of the cell protoplasm which have the power of entering into chemical combination with a given toxin he has called "Seitenkette." Seitenkette and antitoxin are therefore identical chemical bodies.

The Seitenkette theory has received strong support from the experiments of Wassermann and Takaki[6] who have shown that tetanus toxin can be rendered harmless by mixing it with the brain or spinal cord substance of animals which are susceptible of tetanus. This observation has been confirmed by Metchnikoff,[7] who has, moreover, shown that the nervous substance of animals which are insusceptible of tetanus has not this power. This is an important observation, for it not only indicates that the action of the nervous tissues of susceptible animals upon tetanus toxin is not merely of a mechanical nature but that it is in some way connected with their susceptibility and thus offers an explanation of natural immunity.

The facts related above have been confirmed by a number of observers, including Asakawa of Tokio,[8] who appears to have worked the matter out independently, and by Marie,[9] Blumenthal,[10] and Milchner.[11] Nevertheless, the identity of the neutralising substance present in the nervous tissues of susceptible animals with that present in the blood of immunised animals (i.e., antitoxin) cannot be held to be proved. So far we know only that the former acts when brought into intimate contact with the toxin outside the animal body. Wassermann and Takaki did, indeed, find that it acted when separately injected into the animal, but Marie was unable to confirm this statement, and this point needs further investigation.

One of the chief difficulties in accepting the animal origin of antitoxin has been the great improbability of the living body being able to produce when called upon a considerable number of specific antidotes to an equal number of foreign poisons. The Seitenkette theory disposes of this difficulty, for according to it the poisons in question are not so foreign as they would otherwise appear—had they not the power of combining with a portion of normal cell substance they would not have been poisons at all.

Experimental evidence of the truth of the Seitenkette theory has up to the present time been obtained only in the case of tetanus, and perhaps I should add of botulismus toxin,[12] but it is probably applicable to all bacterial toxins as well as to the vegetable toxalbumins, ricin, abrin, crotin, &c., for which antitoxins have been found. There is no reason at present to extend it to the action of the vegetable alkaloids or of poisons of simpler composition, for it would appear that no antitoxin to these substances is formed in animals which are repeatedly submitted to the action of these bodies (Gioffredi[13] claims to have produced a morphia antitoxin in dogs, but this result is in marked contrast to the failure of those who have worked with other alkaloids and needs confirmation), and it is very doubtful whether they ever confer any true immunity.

[4] Deutsche Medicinische Wochenschrift, Leipsic, 1893, S. 1254.
[5] Nature, London, 1896, vol. liii., p. 592.
[6] Berliner Klinische Wochenschrift, 1898, Nos. 1 and 10.
[7] Annales de l'Institut Pasteur, Paris, 1898, tome xii., p. 81.
[8] Centralblatt für Bakteriologie und Parasitenkunde, Jena, 1. Abteilung, 1898, Band xxiv., S. 166.
[9] Annales de l'Institut Pasteur, 1898, tome xii., p. 91.
[10] Deutsche Medicinische Wochenschrift, Leipsic, 1898, S. 185.
[11] Berliner Klinische Wochenschrift, 1898, No. 17, S. 369.
[12] Kempner and Schepilewsky: Zeitschrift für Hygiene, Leipsic, 1898, Band xxvii., S. 213.
[13] Brit. Med. Jour., Epit., July, 1898.

II.—*The Origin of Antitoxin.*

In support of the hypothesis that antitoxin is derived from its toxin it has been urged by Professor Fraser[14] and others that the quantity of antitoxin yielded by an animal during the process of immunisation is proportionate to the amount of toxin introduced. Those who are responsible for the output of diphtheria and tetanus antitoxins would be delighted if this were so, but they know too well that while some horses will yield a powerfully antitoxic serum after the injection of a very moderate amount of toxin, others cannot be got to yield a serum of sufficient antitoxic power for therapeutic use, in spite of the most vigorous treatment. It appears, moreover, that the production of antitoxin continues after the injection of toxin is suspended. Thus Roux and Vaillard[15] have shown that rabbits actively immunised to tetanus might in a short time lose a quantity of blood equal to their total content, and yet the antitoxin power of their serum be practically the same as it was before. Salomonsen and Madsen[16] have seen the antitoxin value of the serum of an animal actually rise during a period when all treatment was discontinued. Their experiment was made as follows. Having immunised a goat with diphtheria toxin until its serum contained five units of antitoxin per cubic centimetre, they discontinued all treatment for two months, during which time the antitoxin value of the serum fell from 5·0 to 0·8 units. At that moment the animal was bled, half of its blood being taken and immediately replaced by the defibrinated blood of another goat. This operation was repeated four hours later, on the following day, and again on the day after. On the last occasion only one-third of the total blood was taken. Thus at the end of this period there remained only one-twelfth of the original blood in the animal. The antitoxin value of the serum was at that moment found to have fallen nearly in proportion to the diminution of the original blood—viz., to 0·13 unit per cubic centimetre, or one-sixth of what it was. Later, however, the quantity gradually increased until in eight days it had reached 0·5 unit per cubic centimetre. It need hardly be said that the blood which was introduced was carefully examined for antitoxin and found to contain none. From this experiment Salomonsen and Madsen concluded that the increase of antitoxin which took place in the blood after the last bleeding could be attributed only to a new production of that substance and that this proves once more that under the influence of the toxin certain cells of the organism have acquired a new and persistent secretory power.

It is possible, no doubt, to interpret these facts somewhat differently—namely, on the assumption of a store of antitoxin in the body from which it is gradually passed into the blood after all injections of toxin have been discontinued. True, Vaillard[17] could not find any such store in the hen injected with tetanus toxin, nor could Dzierzgowski[18] in the horse immunised to diphtheria, yet it may be that a store exists, not perhaps of antitoxin but of some antecedent body, some antitoxinogen which is ready to be converted into antitoxin. While this possibility should be borne in mind it cannot be denied that Salomonsen and Madsen's explanation is the more probable.

The question whether antitoxin is formed out of its corresponding toxin, or is an independent product of the animal organisms remains therefore undecided. The balance of evidence, however, seems to favour the latter hypothesis. The matter would be easily settled could a true antitoxin be found in an animal which had never received any of the corresponding toxin, and whose mother had been equally free from its influence. On this point the experiments of Wassermann and others already alluded to cannot be held to be decisive, for, as already pointed out, some doubt still exists as to the identity of the neutralising substance which they found in the nervous tissues of animals susceptible of tetanus and that which is present in antitoxin serum.

[14] Address before the British Medical Association at Edinburgh, THE LANCET, July 30th, 1898, p. 247.
[15] Annales de l'Institut Pasteur, 1893, p. 82.
[16] Ibid., 1898, tome xii., p. 763.
[17] Quoted by Metchnikoff, Annales de l'Institut Pasteur, 1897, p. 801.
[18] Archiv de Scien. Biol., St. Petersburg, tome v., Nos. 2 and 3.

II.—*Is Antitoxin present in the Blood of Normal Animals?*

Up to the present time no animal which is by nature insensitive or only slightly sensitive to any poison is known to have an antitoxic serum. The hen, so remarkably resistent to tetanus toxin, has no antitoxin in its serum. And the same appears to be true of the scorpion, the tortoise, and the alligator, as well as of fishes, for Metchnikoff[19] found no antitoxin in the blood of these animals after he had administered tetanus toxin to them, and it is to be inferred that there was none at the commencement of the treatment. Rats, mice, and dogs are comparatively insensitive to diphtheria toxin. To kill unit weight of rat requires 1700 times as much toxin as to kill unit weight of guinea-pig.[20] Aronson,[21] indeed, found that the serum of rats prolonged the life of guinea-pigs which were injected with minimal fatal doses of the toxin. But Behring and Wernike,[22] Wassermann,[23] Kuprianow,[24] and myself[25] have found no protective power in the blood of these animals. Calmette[26] found that the serum of the mongoose, an animal which is comparatively resistent to snake poison (to kill this little animal with venom 16 times the minimal fatal dose for a rabbit of two kilogrammes is required), only delayed the death of rabbits which had received a minimal dose of venom mixed with the serum. Fraser,[27] on the other hand, found that the blood of venomous serpents, which are believed to be resistent to their own poisons, protected against cobra poison, but the doses of venom used was only a little more than the minimal lethal. Lewin[28] found that the blood of rabbits which are very tolerant of atropine did not protect other animals against this poison. On the other hand, the serums of a number of *susceptible* animals have been credited with the power of protection against certain poisons. Calmette[29] found that the serums of a number of normal animals as well as of some which had been immunised to other poisons protected against snake venom and against certain bacterial and other vegetable toxins to which they had never been exposed. Of these serums, however, doses of several cubic centimetres were required to protect against a single fatal dose of the poison, and often, indeed, they did no more than delay death. M. Pfeiffer[30] found that the serum of untreated goats protected against from two to three times the fatal dose of killed cholera culture, or of the filtrate of a cholera culture in which the vibrios had been made to dissolve. On the other hand, it will be remembered that Issaeff[31] was able to protect guinea-pigs against inoculation with cultures of cholera and other vibrios which would otherwise have certainly proved fatal, by means of previous injections of various substances, such as 0·7 per cent. salt solution, sterile urine, bouillon, 2 per cent. nucleinic acid, &c.; and that Phisalix[32] showed that injections of cholesterin and tyrosin sufficed to protect animals against doses of snake poison which proved fatal to control animals in from five to six hours. Thus, it would appear that what we may call the general or non-specific protective forces of the body may be put into a state of more than usual efficiency by means of an injection of some irritating or stimulating matter. Among such we may include the serums which we have just considered, and when we consider the feebleness of their protective action when compared with that of the antitoxins we must conclude, as indeed Calmette has already done,[33] that their action is not a true antitoxic action but depends upon cell stimulation, which by causing leucocytosis, or in some way, increases the non-specific powers of resistance of the body. This, however, would not appear to be the complete explanation, because in Calmette's experiments small quantities of the serums were more active when mixed with the toxins *in vitro* than when they were injected some hours before the poisons. And this, I think, points to some direct action, be it only some delay in the rate of absorption of the poison.

Other animal substances have the power of neutralising toxins. Fraser[34] has found that small quantities of rabbit's bile will render harmless the injection of three minimal fatal doses of diphtheria toxin, provided that the two substances are mixed together before injection; and, moreover,[35] that snake poison may be made inert by mixing it with the bile of susceptible mammals or of serpents both venomous and innocuous. Whermann[36] has shown that both snake poison and tetanus toxin are destroyed by prolonged contact with fresh bile; and Calmette[37] finds that bile has no power of neutralising the action of these poisons unless it comes into direct contact with them outside the animal body; he therefore concludes that its action is not antitoxic but digestive.

So far, then, we have not seen the presence of antitoxin demonstrated in the blood of any normal animal. We must now, however, pass on to the consideration of investigations which have pointed to the presence of diphtheria antitoxin in men and horses.

IV.—*The Presence of Diphtheria Antitoxin in Normal Human Serum.*

A. Wassermann of Berlin[38] found that the serum of human beings who, so far as could be ascertained, had never suffered from diphtheria possessed in many cases the power of protecting against diphtheria toxin, even to the extent that one cubic centimetre would protect more or less completely against 10 fatal doses of toxin when mixed with it and injected into a guinea-pig. Of 17 children between one and a half and 11 years of age eight (nearly 50 per cent.) and of 34 adults 28 (nearly 83 per cent.) were found to have such a serum. In some of these instances it may have been higher, for the limit was not ascertained. The serum in all these cases came from hospital patients who were suffering from diseases other than diphtheria. Wassermann held that the greater frequency of diphtheria antitoxin in the serum of adults than in that of children pointed to the relative immunity of man to diphtheria being acquired rather than natural, and was to be attributed to some unrecognised influence of the diphtheria bacillus. Orlowski[39] examined the serum of 10 hospital children who had never had diphtheria and found that in about half the serum had a definite power of neutralising the action of diphtheria toxin. Fischl and Wunscheim of Prague[40] examined the placental blood of 82 infants and found a more or less active antitoxic substance in 68 (83 per cent.). The serum protected against injection both of living culture and of toxin, and not only when culture or toxin were mixed with serum, but also when the former was injected into the subcutaneous tissue and the latter into the peritoneal cavity. Heating to 55° C. for one hour did not destroy the protective body in the serum, which therefore was no alexin but resembled true antitoxin in its resistance to heat and also in that it might be kept for a long time in a cool place without losing its activity.

V.—*The Presence of Diphtheria Antitoxin in the Serum of certain Normal Horses.*

In 1894 Roux and Martin,[41] struck by the tolerance shown by horses to diphtheria toxin, asked themselves whether the serum of these animals had any antitoxic power. This question they answer as follows: "Le sérum d'un cheval, avant toute expérience, a procuré une survie de quelques jours sur les témoins, aux cobayes qui l'ont reçu, et qui ensuite ont été éprouvés par une culture de bacilles diphthériques." No mention is made of the quantities of serum or toxin used. They go on to say that "ce cheval a supporté d'emblée l'injection sous-cutanée de 5 c.c. de toxine diphthérique, sans malaise aucun. Un œdème qui a duré 12 heures s'est formé au point d'injection, et la température s'est élevée le soir de 0·5°." By which they imply that this animal was more resistant to the toxin than usual.

[19] Annales de l'Institut Pasteur, 1897, tome xi., p. 801.
[20] Cobbett: Brit. Med. Jour., vol. i., 1899.
[21] Berliner Klinische Wochenschrift, 1893, Nos. 25 and 26.
[22] Zeitschrift für Hygiene, Leipsic, 1892, Band xii., S. 12.
[23] Deutsche Medicinische Wochenschrift, 1894, Band xx., V.B., S. 20.
[24] Centralblatt für Bakteriologie und Parasitenkunde, Jena, Band xvi., S. 415.
[25] Loc. cit.
[26] Annales de l'Institut Pasteur, 1895, tome ix., p. 225.
[27] Loc. cit., p. 596.
[28] Deutsche Medicinische Wochenschrift, Leipsic, 1899.
[29] Loc. cit.
[30] Zeitschrift für Hygiene, Leipsic, 1895, Band xx.
[31] Ibid., 1894, Band xvi., p. 287.
[32] Comptes Rendus de la Société de Biologie, Paris, 1898, tome v., No. 5.
[33] Annales de l'Institut Pasteur, 1898, tome xii., p. 343.
[34] Brit. Med. Jour., vol. ii., 1897, p. 566.
[35] Ibid., p. 125.
[36] Quoted by Calmette, Annales de l'Institut Pasteur, 1898, tome xii., p. 344.
[37] Loc. cit.
[38] Deutsche Medicinische Wochenschrift, Leipsic, 1894, V.B., S. 120.
[39] Deutsche Medicinische Wochenschrift, Leipsic, 1895, p. 400.
[40] Prager Medicinische Wochenschrift, 1895. Ref. Centralblatt für Bakteriologie und Parasitenkunde, Band xix., p. 852.
[41] Annales de l'Institut Pasteur, 1894, tome viii., p. 615.

In 1894 I made some experiments with the serum of two normal horses.[42] The serum of one, a young chestnut Suffolk cart-horse, failed to show any protective action when one, two, three, five, six, and 10 cubic centimetres mixed with from one to 1·5 fatal doses of toxin were injected into guinea-pigs; but 10 and five cubic centimetres when mixed with the smallest certainly fatal dose of toxin seemed to prolong life a little. The serum of the second horse, a bay cob of some nine years or more, on the other hand, protected in doses of 2·5 cubic centimetres against 10 times the quantity of toxin fatal in 48 hours when mixed with the latter before injection, while 0·5 cubic centimetre failed to do so. Moreover, 1·45 cubic centimetres protected against five times the minimal dose of broth *culture* fatal in 48 hours, while 0·56 cubic centimetre failed. The horse which yielded the first serum proved very sensitive to the toxin. 0·7 cubic centimetre of a weak toxin (minimal fatal dose for 500-gramme guinea-pigs = 0·1 cubic centimetre), with an equal volume of Gram's solution of iodine, caused a somewhat severe constitutional disturbance, accompanied by shivering, profuse sweating, very rapid respiration, and a rise of temperature to 104° F. A similar dose given to the other animal produced a scarcely appreciable disturbance. The susceptibility of these animals, therefore, varied inversely with the protective action of their serums. Meade Bolton[43] of Philadelphia tested the serum of 12 horses with the result that "three were found to possess antitoxin of such a strength that three cubic centimetres was capable of neutralising 10 times the minimal fatal dose of toxin for guinea-pigs." The other nine yielded serums which exerted no influence even in doses of five cubic centimetres; thus he says "there was either a notable amount of antitoxin present or none at all." Though the author freely speaks of "antitoxin" being present he makes no attempt to show that the protective substance was really antitoxin. Recently I have made some experiments with the object of solving this problem.

The Writer's Recent Experiments.

The serums of 14 horses were examined. Some of these proved toxic to certain guinea-pigs, killing occasionally an animal in a few minutes or in an hour or two. This, however, did not, as a rule, interfere with the investigation of the protective property of the serums, because it appeared that only a very small number of guinea-pigs were susceptible to the poisons in the doses employed. Three of the serums, however, proved so frequently fatal that it was impossible to find out whether or no they contained any substance capable of protecting against diphtheria toxin.[44] Of the remaining 11, two were obtained from the horse-slaughterer (Nos. 2 and 9, Table I.) and may possibly have come from diseased animals; two (Nos. 10 and 11) came from animals already injected many times with cultures of streptococci and typhoid bacilli respectively; the others were obtained from new horses which were afterwards used for the production of diphtheria antitoxin. They were therefore under constant observation and there can scarcely be any doubt that they were perfectly healthy animals. The serums of these horses, drawn with all necessary precautions, were preserved without any antiseptic with the exception of Nos. 10 and 11 to which some tricresol had been added. Their power of protecting against diphtheria antitoxin was tested in one or more of the following ways: 1. Toxin and serum were mixed and made up to four cubic centimetres with normal salt solution and injected into the subcutaneous tissue of guinea-pigs of about 250 grammes weight. The quantity of serum was constant—viz., one cubic centimetre—and the quantity of toxin varied between one and 75 minimal fatal doses. 2. Serum and toxin were injected separately, (*a*) the former into the subcutaneous tissue of the abdominal wall on one side of the body and the latter into the corresponding part on the opposite side on the next day; and (*b*) the serum into the peritoneal cavity and the toxin into the subcutaneous tissue immediately after. It was not thought necessary in all cases to determine the degree of protective power within narrow limits. Consequently it has been thought advisable to set down in the table the largest quantity of toxin which was rendered harmless and the smallest which proved fatal. These quantities of toxin are expressed in minimal fatal doses—that is, quantities which proved fatal to 250-gramme guinea-pigs within four days.

[42] Journal of Pathology and Bacteriology, London and Edinburgh, vol. iii., p. 328.
[43] Journal of Experimental Medicine, New York, 1896, vol. i., p. 543.
[44] Journal of Physiology, London and Cambridge, vol. xxiv., p. 29.

TABLE I.—*Antitoxic Action of Normal Horse Serum.*

Serum of presumably normal horses.	Serum and toxin mixed and injected subcutaneously.			Serum subcutaneously; toxin subcutaneously next day.			Serum intraperitoneally; toxin subcutaneously immediately after.		
	Quantity of serum in cubic centimetres.	Quantity of toxin in M.F.D.'s.		Quantity of serum in cubic centimetres.	Quantity of toxin in M.F.D.'s.		Quantity of serum in cubic centimetres.	Quantity of toxin in M.F.D.'s.	
		Maximum non-fatal.	Minimum fatal.		Maximum non-fatal.	Minimum fatal.		Maximum non-fatal.	Minimum fatal.
No. 1	1·0	38·0	75·0	2·0	25·0	—	1·0	15·0	—
,, 2	1·0	28·0	31·0	—	—	—	1·0	2·0	—
,, 3	1·0	10·0	20·0	1·0	2·0	—	—	—	—
,, 4	1·0	10·0	12·5	2·0	3·0	—	1·0	3·5	5·5
,, 5	1·0	5·0	10·0	—	—	—	—	—	—
,, 6	1·0	3·5	5·0	2·0	2·0	3·0	—	—	—
,, 7	1·0	—	1·5 (*a*)	2·0	—	1·25	1·0	—	1·25
,, 8	1·0	1·0	1·5 (*b*)	1·0	—	2·0	—	—	—
,, 9	1·0	1·0 (*c*)	1·5 (*d*)	—	—	—	—	—	—
Serum of horses immunised to diseases other than diphtheria.									
No. 10. Antistreptococcus	1·0	62·0	67·0	2·0	3·0	—	1·0	25·0	33·0
No. 11. Antityphoid ...	1·0	10·0	11·0	—	—	—	—	—	—

† Signifies the death of the animal.
(*a*) † In three days; control died in four days after receiving one minimal fatal dose of toxin. (*b*) † In five days; control died in four days after receiving one minimal fatal dose of toxin. (*c*) † In eight days; control died in four days after receiving one minimal fatal dose of toxin. (*d*) Died paralysed on twenty-seventh day.

Of the 11 serums eight were found to have a well-marked power rendering harmless the injection of diphtheria toxin. Of the latter six, in doses of one cubic centimetre, sufficed to protect against at least 10 fatal doses, when toxin and serum were mixed together; the other two had somewhat less action. The remaining three serums had little or no action, and failed in doses of one cubic centimetre to protect against one and a half fatal doses of toxin. Several of the more active serums were found to protect against considerable quantities of toxin, even when they were not allowed to come in contact with the latter outside the animal body. The degree of protective action was in some instances very considerable. Thus one cubic centimetre of No. 1 and No. 2 protected against more than 38 and 28 fatal doses respectively, and an antistreptococcus serum protected against 62. Professor Sims Woodhead tells me that this degree of protective power has been surpassed in two serums from apparently normal horses which he tested, and which contained in each cubic centimetre the protective power of a whole unit of antitoxin. So far these results merely confirm previous experience and show that the serum of many apparently normal horses possesses the power of neutralising the action of diphtheria toxin, both when mixed with it *in vitro* and when the two are injected separately into the animal's body. In this respect and in that a small quantity is capable of neutralising many fatal doses of the poison it resembles the serum of an immunised animal.

VI.—*Is the Power of Neutralising the Action of Diphtheria Toxin which the Serum of some Normal Horses possesses due to the Presence of Antitoxin?*

The extraordinary activity of some of these serums in neutralising the toxin is unapproached by that of any known substance other than antitoxin, and this makes it extremely probable that they owe their protective power to the presence of the same body which is the cause of the activity of the serum of an immunised animal. The following experiments were undertaken in the hope of establishing the truth of this surmise.

Before describing the actual experiments I must explain the principle upon which they were based. The distinctive feature of an antitoxin, as Ehrlich[45] has shown, is that a

[45] Loc. cit.

given quantity will neutralise a very different number of minimal fatal doses of different filtrates; a fact which he explains on the hypothesis that they contain not only toxin but also a variable proportion of harmless toxoids which also combine with the antitoxin. Now if the serum of certain normal horses owes its activity to antitoxin, a given quantity of it also will neutralise a variable number of minimal fatal doses of different filtrates; and, moreover, *the numbers of fatal doses of two given filtrates neutralised by a fixed quantity of normal horse serum will have the same ratio to one another as the numbers of fatal doses of the two filtrates neutralised by a unit of standard antitoxin.* On the other hand, I think it will be granted that a body which owes its protective action to no chemical affinity for the poison in question, but which acts rather as a cell stimulant, or in some other way causes the body to put its non-specific defences into better order, may be expected to neutralise the action of about the same number of minimal fatal doses of different filtrates, no matter what proportion of harmless toxoids they may contain, for with these latter it has no concern. This, then, was the plan—to determine whether a given quantity of the active normal horse serum would neutralise of two dissimilar filtrates the same number of fatal doses, or whether it would neutralise the same relative number of fatal doses as were neutralised by a unit of antitoxin. And since the test dose (prüfungsdosis) of a filtrate is that quantity which just suffices to kill a guinea-pig of 250 grammes within four days when injected mixed with a unit of antitoxin, it was sufficient for my purpose to determine whether a given quantity of the normal serum in question neutralised of the two filtrates an equal number of fatal doses, or the same multiple or fraction of the two test doses. Now I happened to possess two filtrates which were very dissimilar, the test dose of one containing 119 fatal doses, while the test dose of the other contained only 58. The evidence of the truth of this statement is as follows: Filtrate No. 1 was sown August 1st, 1898, and filtered after 11 days' growth. Six weeks later its minimal dose, certainly fatal within four days to a guinea-pig of about 250 grammes, was 0·01 cubic centimetre. Six months after that it had not appreciably altered (see Table II.). The test dose (=that quantity which when mixed with one unit of standard antitoxin and injected into guinea-pigs of about 250 grammes weight is invariably fatal within four days) of this filtrate was, in April, 1899, rather greater than 0·67 cubic centimetre. It

TABLE II.—*Estimation of Minimal Fatal Dose of Toxin No. I.*

Date and weight of animal.	Toxin.	Result.
1898.	c.c.	
April 28th; 230 grammes.	0·0075	† Ninth day.
Oct. 7th; 250 grammes.	0·008	† Third day.
Oct. 4th; 250 grammes.	0·0085	† Second day.
Oct. 4th; 250 grammes.	0·009	† Fourth day.
Oct. 4th; 250 grammes.	0·0095	† Seventh day.
Sept. 23th; 230 grammes.	0·01	† Fourth day.
Oct. 19th; 230 grammes.	0·01	† Fourth day.
1899.		
April 5th; 250 grammes.	0·009	† Third day.
March 27th; 250 grammes.	0·01	† Sixth day.
April 5th; 250 grammes.	0·011	† Fourth day.

TABLE III.—*Estimation of the Test Dose of Toxin No. I., Sown August 1st, 1898; Filtered August 12th, 1898.*

Date and weight of animal.	Toxin.	Antitoxin.	Result.
1899.	c.c.		
March 30th; 230 grammes.	0·62	1 unit	Small swelling; paralysis; † thirtieth day.
April 5th; 265 grammes.	0·63	,,	Large swelling; paralysis; lived.
March 30th; 220 grammes.	0·64	,,	† Fifth day.
April 7th; 240 grammes.	0·65	,,	† Twenty-fifth day.
March 30th; 260 grammes.	0·66	,,	† Third day.
April 5th; 265 grammes.	0·67	,,	† Sixth day.

TABLE IV.—*Minimal Fatal Dose of Toxin No. II., Sown Nov. 19th, 1898.*

Date and weight of animal.	Toxin.	Result.
1898.	c.c.	
Nov. 25th; 250 grammes.	0·0035	Large swelling; necrosis; lived.
Nov. 25th; 255 grammes.	0·004	† Seventh day.
Nov. 28th; 250 grammes.	0·0042	† Eighth day.
Nov. 28th; 245 grammes.	0·004	† Third day.
Nov. 28th; 240 grammes.	0·0046	† Fourth day.
Dec. 24th; 230 grammes.	0·004	Small swelling; lived.
Dec. 24th; 230 grammes.	0·0042	Small swelling; lived.
Dec. 16th; 250 grammes.	0·0044	† Second day.
Dec. 19th; 240 grammes.	0·0044	† Third day.
1899.		
March 8th; 250 grammes.	0·0043	Necrosis; lived.
March 8th; 260 grammes.	0·0044	Necrosis; lived.
March 21st; 270 grammes.	0·0044	† Second day.
March 17th; 270 grammes.	0·00445	† Second day.
March 13th; 255 grammes.	0·0045	† Fourth day.
March 17th; 270 grammes.	0·00455	† Second day.

TABLE V.—*Estimation of the Test Dose of Toxin No. II.*

Date and weight of animal.	Toxin.	Antitoxin.	Result.
1898	c.c.		
Nov. 25th; 240 grammes.	0·45	1 unit.	Small swelling; lived.
Nov. 25th; 255 grammes.	0·5	,,	† Ninth day.
Nov. 29th; 240 grammes.	0·525	,,	† Third day.
Nov. 29th; 240 grammes.	0·55	,,	† Third day.
Nov. 29th; 230 grammes.	0·575	,,	† Second day.
Nov. 22nd; 235 grammes.	0·6	,,	† Second day.

TABLE VI.—*Normal Horse Serum No. 4.*

Date and weight of animal.	Quantity of filtrate in cubic centimetres.	Quantity of filtrate in fatal doses.	Quantity of filtrate in test doses.	Quantity of serum in cubic centimetres.	Result.
Filtrate No. I.					
1898. Dec. 6th; 260 grammes.	0·075	7·5	0·631	1·0	Great local infiltration; recovered.
Dec. 6th; 260 grammes.	0·08	8·0	0·0118	1·0	Great local infiltration; recovered.
Dec. 12th; 225 grammes.	0·08	8·0	0·0118	1·0	Great local infiltration; recovered.
Dec. 2nd; 225 grammes.	0·1	10·0	0·0147	1·0	† Third day.
Dec. 2nd; 220 grammes.	0·12	12·0	0·0177	1·0	† Third day.
Filtrate No. II.					
Dec. 6th; 240 grammes.	0·0656	15·0	0·0125	1·0	Great local infiltration; recovered.
Dec. 16th; 230 grammes.	0·07	16·6	0·013	1·0	† Eighth day.
Dec. 2nd; 225 grammes.	0·07	16·6	0·013	1·0	† Fourth day.
Dec. 2nd; 225 grammes.	0·0675	20·8	0·015	1·0	† Third day.
Dec. 2nd; 240 grammes.	0·105	25·0	0·02	1·0	† Second day.

was taken to be 0·68 cubic centimetre (see Table III.). The test dose of this filtrate being 0·68 cubic centimetre and the minimal fatal dose 0·01 centimetre, the former contained $\frac{0·68}{0·01}$ = 68 minimal fatal doses.

Filtrate No. 2 was sown Sept. 19th, 1898, and was filtered

three days later. Its minimal fatal dose in December was 0·0044 cubic centimetre. In the following March it was still unchanged. The test dose of this filtrate was in November 0·525 cubic centimetre (see Table IV.). Since the minimal fatal dose remained constant during the next five months it may be assumed that the test dose also remained unchanged (see Table V.). The test dose of this filtrate therefore being 0·525 cubic centimetre and the minimal lethal dose 0·0044 cubic centimetre, it follows that the test dose contained $\frac{0·525}{0·0044}$ = 119 fatal doses. Here, then, were two filtrates which contained such different proportions of toxoids to toxin that with them I might hope to decide whether the normal horse serums were affected by the toxoids in the same way as the true antitoxic serum is. Three of the serums (Nos. 2, 4, and 11) were tested against these two filtrates with the results given in Tables VI., VII., and VIII.

TABLE VII.—*Normal Horse Serum No. 2.*

Toxin No. I.

Date and weight of animal.	Quantity of toxin in cubic centimetres.	Quantity of toxin in fatal doses.	Quantity of toxin in test doses.	Quantity of serum in cubic centimetres.	Result.
1899. April 10th; 250 grammes.	0·145	14·5	0·214	1·0	Slight local infiltration. Remained well two weeks; died paralysed on the twenty-third day.
April 10th; 250 grammes.	0·163	16·3	0·24	1·0	† Seventh day.
April 10th; 250 grammes.	0·177	17·7	0·26	1·0	† Fourth day.
April 10th; 235 grammes.	0·195	19·5	0·286	1·0	† Third day.
Toxin No. II.					
March 30th; 230 grammes.	0·1125	25·6	0·214	1·0	Slight local infiltration; alive and well on thirty-second day; weight 290 grammes.
April 4th; 270 grammes.	0·126	28·6	0·24	1·0	Medium local infiltration; died paralysed on nineteenth day.
March 27th; 230 grammes.	0·14	31·8	0·26	1·0	† Fifth day.
March 27th; 230 grammes.	0·15	34·0	0·286	1·0	† Third day.

TABLE VIII.—*Anti-Typhoid Horse Serum.*

Toxin No. I.

Date and weight of animal.	Quantity of toxin in cubic centimetres.	Quantity of toxin in fatal doses.	Quantity of toxin in test doses.	Quantity of serum in cubic centimetres.	Result.
1899. April 10th; 235 grammes.	0·058	5·8	0·0857	1·0	Local infiltration; necrosis; died paralysed on twenty-ninth day.
April 10th; 235 grammes.	0·064	6·4	0·0943	1·0	† Seventh day.
April 10th; 235 grammes.	0·07	7·0	0·103	1·0	† Fifth day.
April 10th; 240 grammes.	0·0815	8·16	0·12	1·0	† Fourth day.
Toxin No. II.					
March 20th; (1) 270 grammes; (2) 280 grammes.	0·045	10·0	0·0857	1·0	* L. S., necrosis; alive and well on seventeenth day; 285. * L. S., necrosis; alive and well on seventeenth day; 270.
April 4th; 280 grammes.	0·0495	11·0	0·0943	1·0	† Seventh day.
March 29th; 230 grammes.	0·054	12·0	0·103	1·0	† Fifth day.
March 27th; 235 grammes.	0·0675	15·0	0·12	1·0	† Second day.

* L. S. = large swelling at the seat of injection. The numbers refer to the weight in grammes of the animal on the date of the last note.

It will be seen that of each of these serums one cubic centimetre protected against exactly the same fraction of the test dose of each filtrate (i.e., against the same relative number of minimal fatal doses as the unit of true antitoxin had done) and, in other words, against multiples of the minimal fatal doses of each filtrate which differed much, but which bore the same ratio to one another as did the numbers of fatal doses of each filtrate neutralised by a unit of antitoxin. Thus the protective action of the normal horse serums was found to depend upon the presence of a body which combined both with the toxin and with the toxoids of diphtheria just as true antitoxin does. I believe that these experiments afford a proof of the identity of these substances.

But if it be granted that the serum of certain horses which have never been subjected to any process of immunisation contains true diphtheria antitoxin it by no means follows that this is a normal constituent of these animals; indeed, the fact that it is absent in a considerable number is opposed to this conception. On the other hand, I understand that horses are not known to suffer from any affection caused by the diphtheria bacillus. Nevertheless, this micro-organism may affect them in some way not yet discovered, or may perhaps partially immunise them while growing as harmless parasites in some portion of the alimentary canal. The presence of antitoxin in these animals cannot therefore be held to throw any light on the origin of that substance.

It is well known that the value of different horses for the purpose of yielding diphtheria antitoxin varies enormously. If any method of selecting the right animals at the commencement of immunisation were known much time and work would be saved. One therefore asks whether the suitability of a horse for this purpose has any relation to the presence or absence of antitoxin in the blood before any treatment is begun. To this question Meade Bolton [46] gave a negative answer. My own experience is not yet sufficiently advanced to warrant any expression of opinion. But the matter is being now worked out by Dr. Dowson and myself and we hope shortly to make some communication about it.

I should like to express my thanks to Dr. Dowson for having very kindly provided me with many of the serums tested in the experiments which have just been described. It was our intention at the outset to do the work conjointly, but the great pressure of other business has unfortunately prevented him from taking part.

THE AFTER-TREATMENT AND POST-OPERATIVE COMPLICATIONS OF CŒLIOTOMY FOR PELVIC DISEASE IN WOMEN.

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THOUGH the larger number of cases of abdominal section for pelvic disease in women stand to succeed or to fail on the peculiarities of each case, and the individual skill and asepsis of the operator, a certain proportion are, and always will be, dependent for their result upon the post-operative treatment and the care and watchfulness with which it is carried out. In this paper I shall endeavour to set forth my experience and practice founded on a yearly record of between 200 and 300 cases.

THE ROUTINE TREATMENT.

The operation takes place in the afternoon and on returning to the ward after it the patient is made comfortable with

[46] Loc. cit.

hot-water bottles and a plentiful supply of blankets over a bed-cradle. In an ordinary case, without shock, nothing is given, either by mouth or bowel, during the remainder of that day. On the first day after the operation a nutrient enema is given at 2 A.M. At 6 A.M. three ounces of hot water are given by the mouth and are repeated at 9 A.M. At 10 A.M. milk and hot water in equal quantities are given by teaspoonfuls and are repeated every hour and are increased at intervals during the day until by 8 P.M. the patient is taking one fluid ounce of milk with an equal quantity of water every hour. On the second day two ounces each of milk and water are given every two hours. Beef-tea may be partially substituted for the milk and a little weak tea is also allowed. On the third day the amount taken is still further increased to three ounces each of milk and water every two hours. On the morning of the fourth day the bowels are opened by a soap-and-water enema and a little boiled fish and thin bread-and-butter are added to the diet. On the fifth day these are increased in quantity and custard pudding is added. On the sixth day the patient goes upon full diet, consisting of chicken and vegetables, and thenceforth every effort is made to get her to eat well and freely. Later port wine is added and a suitable tonic combined with a laxative completes the treatment of all uncomplicated cases. The patient gets up on the fourteenth day and leaves the hospital for the convalescent home in about three weeks after the operation. The catheter is passed at 8 P.M. on the evening immediately following the operation and after this it is usual to encourage the patient to pass urine herself. In all cases of hysterectomy, however, in which an over-full bladder might injuriously drag on the uterine stump the catheter is passed every six hours for at least 24 hours. The rectal tube is passed immediately before the nutrient enema at 2 A.M. on the first day following the operation and is repeated every four hours for the first two days at least. Failure to pass flatus is always met by washing out the rectum with a warm solution of boric acid or with half an ounce of turpentine to a pint of hot water if the case prove more obstinate.

THE PULSE.

It is impossible to over-estimate the value of the pulse as a guide to the diagnosis, prognosis, and treatment of the complications following abdomino-pelvic surgery. It is an aphorism that the patient varies with the pulse, and this applies to all these cases without exception. To put it broadly, the pulse-rate should be highest during the first 12 hours after operation, but should not even then exceed 120. After this, if all is going well it should certainly have fallen, for a rising pulse after this period is of the gravest possible import. The larger number of cases of hysterectomy for myoma in the Chelsea Hospital for Women never exceed a pulse-rate of 80 or 90 at any time. In estimating the pulse the peculiarities of the patient, the pre-operative pulse, and the nature of the operation must always be taken into account. For instance, washing out the peritoneal cavity is nearly always followed by a quick pulse for a day or two afterwards, while mental excitement in a neurotic individual may cause alarmingly rapid heart action.

THE TEMPERATURE.

It is an excellent rule on first seeing a patient after operation to lay the back of one's hand on her face. A warm face is incompatible with either shock or hæmorrhage; thus this simple sign assures at once against these two contingencies, so important and so necessary to diagnose at once. In an ordinary case the temperature rises pretty abruptly to 99·5° or 100° F. within the first six or eight hours. During the next 12 hours it frequently rises half a degree higher. It then begins to fall and should reach the normal in from one to three days. Many cases, however, never exceed 99·5° at any time, whilst others may maintain a temperature of from 100° to 100·5° for a week without assignable cause or obvious ill-effects. A subnormal temperature means shock or hæmorrhage. A rapidly rising temperature is bad at any time, but it is especially so on the first or second day. A persistently high temperature after operation without anything obvious to account for it should always lead to an examination of the abdominal wound for stitch abscess. Fever occurring in the second week is often due to inflammatory effusion around the ligatures or is the herald of femoral thrombosis. Violent nervous disturbance may lead to very marked and sudden elevation of temperature, but it is not maintained. It is accompanied by a full though rapid pulse and there is an absence of local abdominal signs. These points will allay anxiety. Ether bronchitis if severe will maintain fever and constipation at a later date may spoil the appearance of the chart in the same way.

THE URINE.

It is customary in the Chelsea Hospital for Women to pass the catheter from four to five hours after the operation. From three to four ounces of urine should be withdrawn. A less amount than this implies shock, hæmorrhage, suppression of urine, or injury to a ureter. The commonest cause of scanty urine is shock or severe loss of blood during the operation. If a ureter be injured there will probably be blood in the urine. This should especially be looked for after vaginal or abdominal hysterectomy or any operation involving parts close to the ureters. If the patient present neither the symptoms of shock nor of hæmorrhage and there is no reason to think that the ureters are damaged acute suppression of urine will be diagnosed and treated accordingly.

VOMITING.

Vomiting in amount more than can be accounted for by the anæsthetic is either irritative, neurotic, obstructive, or peritonitic.

Irritative vomiting.—This is due to a gastritis set up by the anæsthetic. The contents of the stomach are persistently ejected; but vomiting does not occur if the viscus be let alone and not continually worried by milk or beef-tea being put into it. It is often combined with flatulent gastric distension and pain referred to the left thorax. Large quantities of bile may be brought up—the so-called "bilious" vomiting. There is no abdominal tenderness, fever, or undue rapidity of the pulse. The treatment is to add lime-water to the milk or to peptonise it. One drachm of bicarbonate of soda to three ounces of hot water will be found remarkably useful if administered half an hour before the next feed is due, or a mixture of bismuth and bicarbonate of soda may be given every three hours. For bilious vomiting there is nothing like the bicarbonate of soda in drachm doses. If the case prove obstinate feeding by the mouth should be stopped for a few hours, a nutrient enema being meanwhile administered. There is one thing that rarely or never fails to stop this form of vomiting and that is a soap-and-water enema. A certain degree of "polarity" doubtless exists between the two ends of the intestinal tract; certainly the surest way to check irritative vomiting is to open the bowels.

Neurotic vomiting.—This is often combined with the foregoing, and when due to neurosis pure and simple it may be very troublesome. The patient is continually retching, whether food be in the stomach or not—she is obviously *trying* to be sick. There are no other signs suggesting anything amiss and the cases in which neurotic vomiting is seen are usually those in which there is the least likelihood of any grave lesion of bowel or peritoneum. A good talking-to will often cure it after everything else has failed. I have found that the addition of a little brandy to the food often tempts the patient to retain it, as there is in these cases often a craving for alcohol or morphia. A mustard leaf to the epigastrium is useful and so is the moral effect of a soap-and-water enema. In obstinate cases the patient must be fed by the bowel.

Peritonitic and obstructive vomiting.—Of these two malignant forms of vomiting there is not much to say. The first is but a partial symptom of a disaster which is made obvious in many other ways. Of the second I would merely say to those who have not seen it that its onset is as a rule very gradual, infrequent at first and continuous at the last, and always accompanied by a progressive distension, beginning, as a rule, and most marked over the descending colon. The vomiting does not become fæcal until quite at the close and often not at all.

DISTENSION.

Abdominal distension after these operations is either epigastric, paretic, obstructive, or peritonitic.

Epigastric distension.—This is often associated with irritative vomiting and owns the same cause. It is obviously gastric, and the treatment is that for irritative vomiting if this be present, together with five minims of essence of peppermint and 30 grains of bicarbonate of soda in three ounces of hot water. This causes the flatus to be belched up. Washing out the rectum or an enema reduces the flatus also. It is important not to mistake a distended transverse colon for the stomach as this has a very different significance. This may happen if the abdomen be examined

without the bandage being unfastened and only the epigastrium properly felt in consequence.

Paretic distension.—By this I mean a uniform abdominal distension without signs of peritonitis or obstruction and due to loss of nervous tone of the intestinal walls. It is a "soft" distension—that is to say, there is no tenderness or abdominal rigidity co-existent with it. It is a general distension, not markedly beginning in, or localised to, one section of the gut. It is not accompanied by an unfavourable pulse or temperature at first, though a degree of irritative vomiting not uncommonly accompanies it. If unrelieved it may become a serious matter, even to the death of the patient. The treatment is to wash out the rectum with half an ounce of turpentine in a pint of hot water, and if this is not entirely successful an enema containing half an ounce of turpentine and one ounce of castor oil to a pint of soap-and-water should be thrown up the rectum as high as possible. If the condition be due to simple paresis of the intestinal walls this will certainly relieve it. A repetition of the turpentine wash-out and the frequent use of the rectal tube will keep the discharge of flatus going and the symptoms will disappear in a few hours.

Obstructive distension.—Here we have a "hard," tender distension—a moderate distension accompanied by persistent and increasing vomiting and an unfavourable pulse and temperature. In pelvic surgery the site of the obstruction is in nine times out of 10 at the sigmoid flexure, and it is important at the outset to realise that it is a partial, not a complete, obstruction. The symptoms therefore are subacute, taking from two or three days to a week or more to reach a fatal conclusion. The distension commences and is most marked in the descending colon and sigmoid, and over the latter there are invariably some rigidity and tenderness. It is a slowly progressive distension first of the large and then of the small bowel. The distension is never very marked, and flatus, and even some small fæcal matter, may be passed because the obstruction is incomplete. In spite of this, however, the symptoms increase; vomiting sets in, at first only of the food and at long intervals, but becoming more and more frequent until it is continuous. Towards the close it may be stercoraceous, but this is by no means invariable. The pulse becomes fast and small and the temperature rises to fall again, perhaps, before death. The only treatment is a colotomy, but it is rare to find a case in which the symptoms lead to a diagnosis in time to render this measure at all likely to succeed. Indeed, at first the existence of an obstruction can only be surmised; later, when the mischief openly declares itself, the patient is usually beyond the reach of surgical aid.

Peritonitic distension.—This form of distension is diagnosed with greater ease than the others, accompanied as it is by marked pain, rigidity, and early collapse. The treatment is most hopeless when once the symptoms are marked. Mr. Lawson Tait's plan of administering sulphate of magnesia every hour until the bowels open may be tried, but I believe this to be fruitless if the condition be really peritonitis. Happily, such an accident is of the greatest rarity nowadays in aseptic abdominal surgery.

PAIN.

A discussion of this symptom centres round the advisability of giving morphia after abdominal section. Pain should be most marked on the night following the operation, and it is rarely so severe as to require a sedative. It is most marked in cases with tension on the parts, such as ventrofixation, or where after the enucleation of myomata the sac left is stitched to the anterior abdominal wall and drained. The single-layer method of closing the abdominal wound gives more pain than the three-layer method; and all incisions through the abdominal muscles are more painful than those through the aponeuroses. If morphia is to be given at all it should be given on the first night for three reasons: (1) the pain is at the worst; (2) distension, which morphia directly favours, never comes on until 24 hours after operation; and (3) peritonitis and obstruction which are masked by morphia do not as a rule declare themselves until the second day. Therefore, if morphia is to be given, it should be given on the first night, and in the form of a one-quarter grain or a one-third grain suppository. But it is rarely required and its habitual use is to be condemned.

HÆMORRHAGE AND SHOCK.

I consider these two formidable complications together because the distinction between them forms the most important problem in all the after-treatment of abdominal section. Shock is often a post-hæmorrhagic condition following severe loss of blood during a prolonged operation; these are the cases so difficult to distinguish from post-operative hæmorrhage. In others it is a condition of true nervous shock such as follows upon a blow in the abdomen, or both causes may be in operation at the same time. In both shock and hæmorrhage the face is cold, the lips are blanched, and the pulse is fast—140 or more. The face is always blanched in hæmorrhage, but it may be considerably less so in shock. The pulse, exceptionally, in both shock and hæmorrhage may be slow, but this is much more likely to happen in shock. Signs of shock date from the operation, but signs of hæmorrhage develop at some definite period afterwards and frequently quickly. This is the surest distinction between them. Shock tends to progressively improve, but hæmorrhage gets progressively worse. In hæmorrhage the patient is restless, but in shock she is quiet as a rule. In hæmorrhage the respirations are often sighing, while in shock they are quick and shallow. Brandy enemata cause shock to improve, but hæmorrhage would only be made more apparent by its administration. Dulness in the iliac fossæ is a fallacious sign of hæmorrhage, for the bowels get floated up against the parietes. The detection of a fluctuating tumour in the pouch of Douglas would be of more service. The necessity for a correct distinction between shock and hæmorrhage lies in the question of saline transfusion. If shock be diagnosed an ounce of brandy per rectum is to be given at once, together with ten ounces of hot water if there has been previous hæmorrhage. A hypodermic injection of five minims of strychnine is also indicated. If the shock be severe or the patient does not react to these measures saline venous transfusion to two or three pints must be unhesitatingly adopted; this is specially indicated in post-hæmorrhagic shock. If hæmorrhage, however, be diagnosed there is but one thing to do—namely, to secure the bleeding vessel. I am most strongly of opinion that transfusion should never be done until the bleeding point is secured, no matter how tempting the operation appears. It is as futile as trying to fill a bottle with a hole in its bottom. But, worse than this, it prevents nature from checking the hæmorrhage by her own method, that is, by the formation of a clot in the bleeding vessel, when, by reason of the hæmorrhage, the circulation through the part is sufficiently feeble to allow of it. That this is so is proved by the fact that after death the peritoneal cavity will be found to be full of a weak mixture of blood and saline solution. The vessels, in short, have been flushed out with salt and water.

It is important to remember that even when the wound is re-opened no bleeding point may be found if the hæmorrhage has been severe. In this case a careful search must be made for a slipped ligature, while an assistant gets on with transfusion as quickly as possible. As the blood-pressure rises the bleeding point will probably declare itself. No anæsthetic is required for these proceedings as a rule, and it is wonderful how nearly moribund a person may be and yet recover after transfusion. Instead of venous transfusion a pint of warm saline solution may be injected under each breast by means of an aspirating trocar, a tube, and a glass funnel; or large rectal injections may be given. Personally, I prefer venous transfusion. In both hæmorrhage and shock the head is to be kept as the lowest part of the body and every effort should be made to maintain warmth. Anxious uncertainty will often be the lot of the watcher in these cases, but it is better to re-open a wound and make sure that the condition is due to shock only than to transfuse a patient with a patent vessel.

Remote shock.—I have applied this term for want of a better to a condition which will be familiar to all who have experience of abdomino-pelvic surgery. The patient is elderly, she is enfeebled, and she is the subject of cardio-vascular degenerations. The operation has been severe and usually accompanied by considerable loss of blood. Shock, immediate and presenting the symptoms just described, has followed on it and the patient under appropriate treatment has rallied from it. On the morning following the operation she presents a very typical picture. The pulse is fast, strong, and throbbing, the eyes are glistening, and the mental condition is very active. The patient expresses herself as feeling "quite well," "never better," and so forth. All these symptoms become accentuated as the day goes by and there are great restlessness and a total absence of sleep. On the next day the pulse is faster still but softer and more running.

Mental excitement remains but the patient has a difficulty in recognising those about her and she rambles. There is a progressive loss of strength and the skin becomes cold, the pulse imperceptible, and the respirations fast. Death ensues in from two to four days after operation. The treatment is stimulants, but nearly all cases in which these symptoms have typically developed in my experience have ended fatally. Post-mortem examination reveals a healthy stump and bowels and no peritonitis; in short, it discloses no adequate cause for death.

Peritonitis and ileus are discussed under the heading of "distension."

RESPIRATORY COMPLICATIONS.

Ether bronchitis is a frequent and troublesome complication and I have found the following mixture invaluable for it: 30 grains of bicarbonate of soda, half a drachm of aromatic spirit of ammonia, and 20 minims of spirit of chloroform to an ounce of camphor water, to be taken every four hours. Broncho-pneumonia spreading from a primary bronchitis requires the usual remedies. Septic broncho-pneumonia is characterised by diffuse dry râles with little or no expectoration; the outlook then is hopeless. Pulmonary embolism, if large, causes immediate death with cyanosis and dyspnœa. I have, however, seen two cases in which, with sudden pain and dyspnœa, a large area of consolidation rapidly appeared. I regarded these as examples of pulmonary infarction on a scale not large enough to endanger life.

THE ABDOMINAL WOUND.

Hæmatoma of the abdominal wound is discovered when the skin stitches are removed at the end of a week. I always scrape the clot out and if the cavity be small powder it thickly with iodoform and let it granulate up; this it does rapidly if kept dry. If the cavity be large it had better be closed afresh with silkworm-gut sutures; this is excellent treatment.

Stitch abscess may declare itself at any period after an operation in which the wound is closed with buried sutures.

As I have before said, fever without anything else to account for it should always awaken suspicions of suppuration around a buried suture. The treatment is to let out the pus and allow the cavity to granulate, which it will often do without removing the suture. If it refuses to do so the offending stitch must be removed.

BLADDER SYMPTOMS.

It is a common thing for pain on micturition to develop about the beginning of the second week. On examination the urine is found acid but it may contain a little pus. It is an interesting point that salol in doses of 15 grains taken three times a day is almost a specific for this condition. It is no doubt due to an inflammation of the bladder wall by infection from the site of the operation. Probably at first the mucous coat escapes and so the urine is unaffected; subsequently when this also is inflamed pus appears in acid urine. The organism causing this form of cystitis is either the bacillus coli communis or ordinary pus organisms, not the micrococcus ureæ; therefore there is no alkalinity of the urine. After the cystitis has existed for some days a secondary infection with the last-named organism may occur and the urine may become alkaline and ammoniacal.

Suppression of urine is either obstructive or is due to renal shock. In the first case the ureters have been divided or have been included in a ligature or clamp. The urine after all operations near the ureters should be examined for blood. Clear urine shows that in all probability the ureters are intact. The condition is grave and the surgeon must adopt such treatment as the case indicates. After vaginal hysterectomy in which clamp forceps have been left on these should be removed or re-adjusted lest they include the ureter. In the second case the ordinary measures for renal suppression, such as large drinks of hot water or tea, or copious injections up the bowel, should be tried. Dry-cupping the loins, the hot-air bath, and pilocarpin are indicated without delay if these milder measures do not succeed in stimulating the kidneys.

FEMORAL THROMBOSIS.

This most interesting complication appears late. On referring to a considerable number of these cases I find that in the great majority of them the symptoms developed between the eleventh day and the thirteenth day after the operation. It is usually ushered in with fever, a sallow face, and marked malaise. The leg is very tender when first swollen or the pain may precede the swelling. It is variously localised, sometimes in the inflamed vein, but not uncommonly on the outer side of the leg. The swelling may be limited to a non-pitting enlargement of the calf or there may be œdema of the whole or part of the leg. After being acutely tender and painful for a few days it gradually subsides. A relapse may occur and a tendency to swelling of the leg is left for many months. The most striking thing about this complication is the varied nature of the operations preceding it. Thus I have seen it occur after abdominal hysterectomy, after vaginal hysterectomy, and after simple incision of the abdominal wall, and I have seen left femoral thrombosis follow on the removal of a right ovarian cyst through abdominal incision. If I had not seen it occur after vaginal hysterectomy I should have believed that the condition was due to a spreading thrombosis of the superficial epigastric veins secondary to some infection through the cut edge of the abdominal wound, but though this may be one channel of infection it is evident by its occurrence without an abdominal wound that there must be others. There is no direct communication between the veins in the broad ligaments and the external iliac vein, and even if there were it would not explain left thrombosis after right ovariotomy. That it has followed on simple abdominal incision without interference with the pelvic organs is remarkable. Again, it is nearly always the left leg which is affected, though the right or both may suffer. In some cases the popliteal or deep tibial veins would appear to be primarily thrombosed. In these cases the infecting agent must have travelled against both venous blood and lymph stream. The whole question is wrapped in mystery and it well merits careful investigation. It appears to me that the balance of evidence is in favour of a general systemic infection with a local spot of "least resistance." The treatment is rest, elevation, firm bandaging, and the application of glycerine and belladonna locally, while the general health, which is often much lowered, requires good feeding and stimulants.

INFLAMMATORY PELVIC EFFUSION.

Inflammatory pelvic effusion around the site of operation occurs at about the end of the second week. The symptoms are fever, weakness, and wasting (often marked), and nearly always frequent and painful micturition. On vaginal examination a pelvic effusion is felt which in the majority of cases, the patient being kept in bed, subsides in a week or so without suppuration. But pus may form and then usually discharges by the vagina or bowel with marked remission of the symptoms. If a fluctuating swelling appears in Douglas's pouch it should be opened, for once the pus has been discharged the patient mends rapidly. Pending this relief stimulants, quinine, and good feeding are indicated.

ACUTE PAROTITIS.

This unfortunate and unexplainable complication is rare. The larger number of cases subside without suppuration, but in patients who are cachectic and enfeebled the whole gland may slough. There is then much constitutional depression and great pain and the condition is dangerous both from these causes and from the possibility of the ulcerative process extending into the external carotid artery. In this emergency it would probably be necessary to ligature the common carotid, as the œdema and swelling extend down the neck too far to render it possible to reach the external carotid through healthy tisues. In the milder cases painting with belladonna and glycerine and the application of a wool pad are all that are required. When the skin becomes dusky these measures should be changed for fomentations and cautious incisions in lines corresponding to the important vessels and nerves of this region. Plenty of stimulants and a liberal diet are necessities. More or less facial paralysis may co-exist or even remain permanently after the inflammatory process has subsided.

CHRONIC SUPPURATION OF THE ACCESSORY NASAL SINUSES.

BY BERTRAM COOPER, M.R.C.S. ENG., L.R.C.P. LOND.

INFLAMMATION of these sinuses when acute is undoubtedly very common. There can be few who have not felt the frontal ache which is so often the accompaniment of a severe "head cold." When, however, chronic suppuration affects these cavities we have a far more serious disorder

which is still imperfectly understood, perhaps because of its previous rarity before the advent of its probable parent influenza.[1] The indications of frontal and antral empyema are often clearly shown. Unfortunately the same cannot be said of the sphenoidal and ethmoidal, but the two latter are rarely involved except in common with the others. In view of the recent and increasing interest which has arisen on this subject I venture to record three cases which for comparison I quote together.

In these cases the appearance of the patients was anæmic and the teeth were much decayed, and there was a history of influenza. The nasal discharge was unilateral; it was first mucoid and then intermittently purulent. In one case the pain followed the course of the supra-trochlear nerve and in the other cases it followed the course of the supra-orbital nerve. In two cases the pain was not apparently dependent upon retention, and in the third it was less or disappeared with a free flow of pus. Its duration was never more than for four of the 24 hours, and it was most intense about midday. Slight pain was also present in all of the patients in the malar and superior maxillary bones on one side. In two cases the tenderness was not severe and followed on slight pressure on the nasal side of the orbital roof. In the third patient there was no tenderness. Sneezing was a constant annoyance and heralded the nasal discharge. All three patients suffered from a spasmodic cough which was worse after sleep. In one patient the maxillary antrum on the same side was distended with pus. This some years before had been drained through the alveolar process. In the other two patients implication of the antral and the other sinuses was not marked. In all congestion of the conjunctivæ, especially on the affected side, transitory giddiness, tinnitus aurium, indefinite pains in the head, and slight epiphora were present and often there was a raised temperature. The inflammation was at times quiescent, only to be again and again excited by "catching cold" which was of frequent occurrence. A polypoid state of the mucous membrane of the middle and inferior turbinated bones on one side, and in two of the patients mature polypi also, were associated conditions.

The treatment consisted in the removal of the polypi and cauterisation of the diseased mucous membrane. Nasal douching was then tried, but all the patients complained of deafness and increasing tinnitus, so a coarse spray was substituted with a warm alkaline antiseptic and occasionally a menthol or alcohol fine spray. None of the patients would entertain any operation beyond those for the removal of the polypoid growths.

Though there has been much improvement in respect of pain and discharge, yet it must be confessed that there has been no absolute cure. One patient since the removal of the polypoid growths has had an intermittent semi-purulent expectoration. The presence of pus in the sputa corresponds accurately with the intermittent character of the purulent nasal discharge. I would suggest the following queries: 1. As to the origin of the disease, is it not probable that nasal polypi were present at the time of the so-called "influenzal" illnesses? 2. Were not the decayed teeth the starting point of the "coagulation-necrosis" of the nasal mucous membrane? The intimate relation between the teeth and the nasal cavities has been already shown.[2] The case referred to was cured by the extraction of a tooth. 3. Is it not likely that the "attacks of influenza" were really acute suppuration of the sinuses and that the symptoms were those which would occur as part of an infective process were the duct or ducts temporarily blocked? 4. As regards the advisability of operation on the frontal sinuses, one would feel inclined to hope that the partial shrinking of the sinuses which occurs with advancing age would tend to ameliorate the distressing symptoms and, with a better general state of health, to bring about a natural cure. This would be assisted by appropriate palliative treatment; though before this perhaps ideal state is attained the patient must run a grave risk of local and general infection. The direct operations for permanent cure are numerous and they aim at the obliteration of the diseased cavities. This filling up of air reservoirs must be, at least physiologically, detrimental. The good results of surgical treatment for empyema of the maxillary antrum are beyond dispute, but operations on the (surgically) more remote sinuses at present seem much less hopeful and by no means free from danger. Lastly (5) I would point out that Mr. Walsham's warning against the nasal douche was exemplified by the foregoing cases.

Chiswick, W.

[1] THE LANCET, Feb. 19th, 1898, p. 486.

[2] A Case of Coryza Apparently of Dental Origin, THE LANCET, Jan. 1st, 1898, p. 49.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF STRANGULATED RIGHT INGUINAL AND SCROTAL HERNIA; LAPAROTOMY; RECOVERY.

BY HENRY SMITH, M.R.C.S. ENG., L.R.C.P. LOND.

IN the first number of THE LANCET of this year was published an interesting paper by Dr. E. Matthews Owens entitled "Herniotomy plus Laparotomy Successfully Performed under very Unusual and Difficult Circumstances." Its perusal was of great interest to me at the time and has since been the means of saving life in a case which, with your permission, I will briefly record.

A fellah, aged about 20 years, who was employed on the Nile reservoir works, was brought to me there at 10 A.M. on May 30th, 1899. While lifting a large stone a few minutes before he had been seized with sudden pain in the groin and a cursory examination quickly revealed the fact that the patient was suffering from a tightly strangulated right inguinal and scrotal hernia. Gentle taxis was tried, but recognising the probable necessity for operation he was removed without delay to the American Mission Hospital and there was seen by Dr. H. T. McLaughlin. Taxis was again attempted under an anæsthetic but without result. An incision three inches long was at once made by Dr. McLaughlin over the external ring and the structures were divided until the bowel appeared, much congested, but not having lost its polish. Seven or eight inches of the bowel were found external to the ring and every effort was made to return it. The incision was cautiously enlarged to the utmost limit of safety. Native assistants raised the lower limbs till the position of the body was entirely reversed. The most painstaking manipulation was persevered with but to no purpose. In this dilemma I thought of the paper in THE LANCET and Dr. McLaughlin gladly followed the plan carried out by Dr. Owens. A median incision four inches in length was made. One hand was introduced into the abdominal cavity, some flatus passed along, and working with both hands the bowel was with very little difficulty partly drawn and partly pushed back into the abdomen. Both wounds were now stitched up and the right testicle, which had presented at the lower end of the inguinal incision, was restored to its place. The whole operation took nearly three hours. The after-treatment was simple. The patient did not display a single bad symptom. The stitches were removed on the fourteenth day and the patient was discharged on the thirtieth day radically cured, and he now has the additional satisfaction of exchanging his duties as a labourer for the lighter work of a watchman in consideration of his experiences.

I do not for a moment mean to compare the difficulties of the operation with those of Dr. Owens. Our operating-room is small, but vastly better than a ship's cabin, and our antiseptics are more up-to-date. I wish rather to thank him and you for the publication of such a case the recollection of which at the right moment proved so useful to our patient.

Assiout, Upper Egypt.

SUPRAPUBIC DRAINAGE IN PERINEAL FISTULA.

BY J. CROPPER, M.B., B.C. CANTAB.

IN the autumn of 1896 a boy, aged 11 years, from the neighbouring village of El Zib on the coast, came here with a perineal fistula the result of a native quack operation for stone. This operation is generally performed by pressing on the bladder above the pubes and cutting down on to the

stone in the perineum, the half of a freshly killed chicken being the only dressing applied. At the time I attempted to close the opening by a plastic flap operation but without success. The patient was then treated with temporary benefit by an Arabian doctor who applied a hot iron wire to the fistula. Despairing of any good result the boy then went home. In the summer of 1897, however, he turned up again, having become a great nuisance to his friends by his foul condition. Having passed a catheter I fully excised the fistula (the patient being under chloroform) in its whole depth and freely opened the ureter, bringing the edges together deeply with silkworm-gut sutures. No catheter was tied in and healing by first intention took place, and in a few days the patient left us, apparently soundly healed. After the lapse of a year, however, the fistula opened up again, owing, as was afterwards discovered, to a small urethral calculus of the size of a grain of wheat which had lodged in the internal opening of the fistula and to pressure on the perineum from riding a donkey. I again cut down as before, finding the calculus in the fistula, and closed the wound with deep sutures. Unfortunately, however, healing did not take place. Later I opened the bladder suprapubically and attempted to drain it with a curved silver tube. This, however, caused so much irritation (not draining well) that it had to be removed. Owing to a severe attack of malaria nothing further was done. On May 18th, 1899, finding that no stricture existed I again opened the bladder, cutting down on a catheter introduced into the bladder and drained it by a straight rubber tube (No. 12) perforated at the sides, packing the wound with iodoform gauze, and at the same time freshening the fistula. The boy was kept lying half over on his face and the bladder drained very well. There was at no time any rise of temperature and on June 14th the fistula was soundly healed and all the urine was passed normally.

Acre, Palestine.

A CASE OF COMPLETE ANTERO-POSTERIOR DISLOCATION OF BOTH KNEES.

BY H. E. HAYCOCK, M.R.C.S. ENG., L.R.C.P. EDIN.

I VENTURE to send a short account of the above as I think few can have seen the injury which must be extremely rare.

On March 4th, 1899, a strong and muscular man, aged 31 years, employed to drive the engine connected with some brickworks near here, was oiling some bearings when his arm for some unexplained reason became entangled in the band which passes from the axle of the flywheel to the governors. His account shows that he was dragged to the axle and there performed many revolutions in a space about two feet from the ground. The noise occasioned by his feet striking the wooden floor attracted a fellow-workman who promptly stopped the engine. The band was found tightly bound around the patient's arm and had to be divided to release him. His boots were much shattered and one had lost its sole. On examination he complained of pain in both legs, more especially beneath the knees, and the condition of both was much the same and as follows. Anteriorly the tibiæ were prominent with a large depression above. There was not much effusion. The patellæ were freely moveable. Posteriorly the condyles of the femur were prominent and already (within an hour of the accident) there was considerable bruising. Both joints could be readily flexed. Both legs were congested and swollen. Reduction required a fair amount of force but was readily effected, and both joints resumed their natural shape. The after-treatment consisted of the application of back splints with icebags to the knees. The patient now has (four months after the injury) complete power of flexion and no pain in the joints, though he still suffers from a wound in one foot. He wears knee-caps and uses crutches.

Alfreton.

DEVON AND EXETER HOSPITAL.—At the quarterly meeting of the governors and friends of the Devon and Exeter Hospital held on July 25th it was decided on the motion of Mr. Bell that no patient or his friends should pay the whole or any part of the cost of a recommendation for admittance to the institution and in the case of any such payment the recommendation would be forfeited.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF SARCOMA OF THE CAROTID SHEATH; REMOVAL OF THE GROWTH TOGETHER WITH PORTIONS OF THE CAROTID ARTERIES, INTERNAL JUGULAR VEIN, AND PNEUMOGASTRIC NERVE; RECOVERY.

(Under the care of Dr. SCANES SPICER and Mr. H. STANSFIELD COLLIER.)

FOR the notes of the case we are indebted to Mr. R. E. Hodgson.

A man, aged 59 years, was admitted into St. Mary's Hospital on Jan. 13th, 1898. He complained of "loss of voice" and of a swelling in the neck. The patient had never suffered from venereal disease. He had enjoyed good health until 19 weeks before admission, when he suffered from a severe cold and cough and his voice became hoarse. The hoarseness gradually became worse and he suffered from attacks of difficulty of breathing which came on nearly every night and lasted for some hours. The attacks were attended by noisy stridor and some of them were severe and accompanied by epigastric recession. The patient was under the care of Mr. Clarke of Horley who discovered a swelling in the left side of the neck and attributed the attacks of dyspnœa to irritation of the recurrent fibres of the vagus nerve. Iodide of potassium was given and the patient was sent to London to be seen by Dr. Spicer. The patient was shown at the meeting of the Laryngological Society on Dec. 8th, 1897, when the lump in the neck resembled a mass of enlarged matted glands. For a few days before admission the patient had been free from attacks of dyspnœa, but he said that the cough was as bad as ever. While the patient had been under observation the swelling had markedly increased in size.

Upon admission the patient was very thin. He had a sallow complexion and well-marked arcus corneæ. There was a hard mass of about the size of a hen's egg situated beneath the left sterno-mastoid muscle. It was ovoid in shape. Its long axis was in the line of the common carotid; its lower limit was at the level of the lower border of the cricoid and its upper limit corresponded with the upper border of the thyroid cartilage. The mass was not lifted up with the larynx in the act of swallowing; the sterno-mastoid muscle could be moved over it and it appeared to be quite separable from the transverse processes of the vertebræ. The carotid pulse could be felt upon palpation of the fore part of the lump, but there was no expansile pulsation of the mass. Manipulation caused instant cough. The patient preferred to speak in a whisper, but upon request he phonated in a very husky manner. Laryngoscopic examination showed that the left cord lay motionless in the cadaveric position. The right cord was natural. No anæsthesia of the larynx was observed. The left pupil was smaller than the right one. It re-acted to accommodation and to light. The left palpebral fissure was smaller than its fellow and there was marked drooping of the left upper eyelid, though upon effort the patient could raise the lid well. No other evidences of disease were found and repeated observations failed to discover any changes in the cardiac and respiratory rhythm.

An operation was performed on Jan. 21st, 1899. Mr. Henry Davis administered ether, followed by chloroform. Mr. Collier exposed the tumour by an incision along the posterior border of the sterno-mastoid and by transverse division of its fibres. The tumour appeared to be limited by the carotid sheath and it surrounded the contained structures. Ligatures were placed upon the internal jugular vein and the common carotid close to the clavicle, and the vessels together with the vagus nerve were divided on the thoracic side of the tumour. The growth was readily separated from

TABLE OF 13 CASES OF TUMOUR IN WHICH OPERATION INVOLVED SACRIFICE OF ALL THE STRUCTURES CONTAINED IN THE CAROTID SHEATH.

Number of case.	Reference.	Operator.	Sex and age.	Nature of tumour, &c.	Operation.	Result.	Remarks.
1	Annales de la Médecine Physiologique, vol. xxvi., Paris, 1834.	L. Labat.	F., 28.	Tumour of lymphatic glands of eight years' duration (left side).	Removal of tumour with common, internal and external carotids, internal jugular vein, and vagus nerve. (During the operation there was for a short time suspension of respiration, and towards the end of the operation complete syncope which was transient.)	Recovery. The patient was alive and well seven years later.	—
2	Archives Générales de Médecine, Paris, 1856.	Roux.	M., 45.	"Cancerous" cystic tumour of seven months' standing (right side).	Removal of tumour with common carotid, obliterated internal jugular, trunk of vagus and sympathetic. (During the operation there were coughing and retching.)	Death on seventh day from "meningo-encephalitis of right side of brain" (? septic thrombosis).	Harsh voice and some difficulty in expectoration were the only appreciable phenomena which were the immediate consequence of the operation.
3	Archiv für Klinische Chirurgie, vol. xxi.	Esmarch.	M., 55.	Recurrent lympho-sarcoma of left side.	Removal; section of common carotid, internal jugular and vagus.	Death six weeks after operation. Cause probably erysipelas, attended by brain symptoms. No necropsy was held.	Progress appeared satisfactory for a fortnight when erysipelas set in and was followed by complete aphonia, inability to swallow, and partial unconsciousness.
4	Centralblatt für Chirurgie, No. x., 1880.	Sawostitsky.	M., 14.	Lympho-sarcoma of left tonsil involving carotid sheath.	Removal after tracheotomy and ligature of common carotid and of internal jugular vein. A portion of the vagus nerve was removed with the growth.	Death on seventeenth day. Necropsy showed purulent meningitis and double pneumonia. (? Septic thrombosis of cerebral vessels.)	A complete right hemiplegia appeared on the seventh day after operation.
5	Deutsche Zeitschrift für Chirurgie, vol. xxxvi. (Paper by Widmer)	Bardeleben.	M., 57.	Carcinoma of right side.	Removal. Common carotid, vagus and phrenic, and internal jugular divided.	Death after two hours. No post-mortem examination was made.	Details wanting.
6	Vogel Correspondenzblatt für Schweizer Aertze, 1883.	Kocher.	F., 45.	Malignant goitre of left side.	Tumour removed with part of larynx; internal jugular vein and common carotid artery divided; vagus, sympathetic and hypoglossal nerves removed.	Death ten hours after operation, probably from hæmorrhage from larynx.	—
7	Berliner Klinische Wochenschrift, No. xxiii., 1883, p. 343.	Riedel.	M., 49.	Malignant goitre of left side.	Removal, with carotid arteries, internal jugular vein, and vagus (slowing of the pulse was observed when traction was made upon the tumour, but the division of the vagus had no effect upon pulse or respiration).	Death on fourteenth day from purulent bronchitis and œdema of lung.	Appeared to be doing well until the tenth day.
8	Annals of Surgery, vol. xxii., p. 164.	Mynter.	?	Melanotic sarcoma of left side.	Extirpation, with excision of common carotid, internal jugular, and vagus.	Death on seventeenth day from cerebral anæmia.	—
9	International Beiträge zur Wissenschaftlichen Medicin. R. Virchow, 1891, vol. i.	Riegner.	F., 32.	Sarcoma of right side.	Removal. Common carotid and internal jugular tied. Vagus and sympathetic divided.	Death on fourth day from bronchopneumonia affecting both lungs, but chiefly the left.	—
10	La Riforma Medica, 1892, vol. iv., p. 466.	G. Caccioppoli.	M., 40.	Small-celled sarcoma of left side. Had existed for five months.	Portions of vagus and of hypoglossal nerves of common carotid and of internal jugular vein removed with tumour. (During the operation the patient's condition was very grave, the pulse became very small and irregular, and the respiratory acts very slow and separated by long intervals.)	Recovery.	No subsequent disorder of thoracic or abdominal function was observed.
11	Beiträge zur Chirurgie, Festschrift, Th. Billroth, Stuttgart, 1892, p. 273.	Gussenbauer.	M., 40.	Branchiogenic epithelioma of left side.	Extirpation of tumour with excision of portions of internal jugular, common carotid, vagus, and sympathetic. (During the operation there were no noteworthy changes in the pulse or respiration.)	Death 48 hours after operation from œdema of lung. Post mortem, thrombosis of left internal carotid and left middle cerebral artery. Pulmonary carcinoma of right side; bilateral lobular pneumonia; Bright's disease; œdema of glottis.	Signs of right-sided hemiplegia appeared five hours after operation.

TABLE OF 13 CASES OF TUMOUR IN WHICH OPERATION INVOLVED SACRIFICE OF ALL THE STRUCTURES CONTAINED IN THE CAROTID SHEATH (*continued*).

Number of case.	Reference.	Operator.	Sex and age.	Nature of tumour, &c.	Operation.	Result.	Remarks.
12	Medical and Surgical Reports of Presbyterian Hospital, New York, vol. ii., 1897.	C. K. Briddon.	M., 24.	Recurrent carcinoma secondary to cancer of tongue which had been removed six months before.	Excision of growth with portions of carotid arteries, vagus nerve, internal jugular vein, and a part of pharyngeal wall. (Patient took anæsthetic poorly throughout operation.)	Recovery. Well at date of report, three months after operation.	—
13	Present paper.	H. S. Collier.	M., 59.	Sarcoma of left side.	Extirpation with excision of portions of carotid arteries of internal jugular vein and of vagus nerve and of some sympathetic fibres. (When traction was made upon the growth there were alarming symptoms of respiratory and cardiac failure.)	Recovery. In good health 17 months after operation.	—

the pharyngeal wall and was now drawn out of the wound. The carotid arteries and internal jugular vein were next ligatured at the level of the hyoid bone and the tumour together with the involved structures was removed. Until the parts on the cephalic side of the growth were interfered with there was no respiratory disturbance, but at this time breathing became shallow and infrequent and as the vagus nerve was being isolated respiration ceased. Artificial respiration was immediately resorted to and was required for two minutes. Cessation of breathing was attended by very irregular, hurried, and feeble pulse. At the close of the operation the patient was much collapsed, but he very soon rallied. Recovery was uneventful and the patient rapidly improved in general condition, increasing considerably in weight. There was no observable alteration in the visceral functions.

On June 4th, 1899, the patient was seen by Mr. Collier. The man said that he had enjoyed good health since he left the hospital. Except for the effects of paralysis of the left recurrent laryngeal nerve and of the sympathetic nerve to the left iris and eyelids he appeared to be well.

Examination of the parts removed.—The carotid sheath appeared to form an adventitious capsule for the growth. The growth surrounded the common carotid artery and its bifurcation. The arteries were patent and the intima was normal. The internal jugular vein was obliterated by pressure and by involvement of wall and to the cardiac side of the obliterated portion and a few millimetres away from it there was a small polypoid mass projecting into its lumen. The vagus nerve could be traced through the growth and other nerve fibres (? sympathetic) were evident beneath the inner part of the capsule. Microscopic examination (kindly made by Mr. Plimmer) showed that the growth consisted of mixed round and spindle cells and that it was devoid of a reticulum. A section which included the wall of the common carotid showed here and there fibrous bands, continuous with the external coat of the artery, passing out into the tumour.

Remarks by Dr. SPICER and Mr. COLLIER.—The nature of the swelling was doubtful until the mass was exposed, but it seemed probable that it would prove to be malignant because of the paralysis of the vocal cord and of part of the sympathetic nerve. The narrowing of the left palpebral fissure and the drooping of the upper eyelid were thought to be due to paralysis of the unstriped muscle fibres of the lids. At that stage of the operation in which traction was made upon the tumour the condition of the patient changed very suddenly and he appeared to be very near death. The respiratory and cardiac failure seemed to result from stimulation of the central end of the pneumogastric. When the section of the nerve had been made there was no longer irregularity of respiration. In the accompanying table references are given to 13 cases of tumour in the removal of which all the structures contained in the carotid sheath have been sacrificed. The results shown in this list confirm the traditional view that removal of malignant tumours involving the carotid sheath is extremely dangerous to life. That there is no physiological veto upon the operation was shown as long ago as 1826 by Labat, who thought that the surgeons of his time were wrong in "exaggerating so much the dangers which operations upon the common carotid, internal jugular vein, and pneumogastric nerve present." In his time, of the structures concerned it was the vagus which was held in most awe, and Labat added to the report of his successful case the results of experimental division of the vagus in dogs. He found that unilateral division was constantly followed by survival, while simultaneous division of both vagi "entailed instant death." It is noteworthy that in five of the fatal cases of which we give outlines there was clinical or post-mortem evidence of thrombosis of cerebral arteries. In no case does it appear that hemiplegia was observed immediately after the operation. In one case paralysis showed itself five hours after the operation and it may well be that to imperfect collateral circulation were added the effects of an enfeebled heart and increased resistance to outflow from ligature of the internal jugular vein. In those cases in which cerebral symptoms appeared some days after operation sepsis was obviously an important factor in determining cerebral thrombosis. In three of the nine fatal cases death was immediately attributed to pulmonary complication—either to purulent bronchitis and œdema or to broncho-pneumonia. It was not suggested in the reports that the lung complications resulted from division of the vagus nerve nor was any mention made of anæsthesia or paralysis of the epiglottic region. Roswell Park in a valuable paper[1] in which he gives the outlines of 50 cases of injury to the vagus nerve during operations upon the neck comes to the conclusion that "in the fatal cases it is impossible to say that in any instance death was due to injury to the nerve." After reading the reports of a large number of cases of injury to the vagus nerve we agree with his conclusion as far as it goes. In some of the cases the occurrence of lung disease could be accounted for by the fact that the operation implicated the pharynx or the larynx, but in other cases mention of the occurrence of bronchitis, œdema of the lung, or broncho-pneumonia is so common that it is probable that injury to the trunk of the vagus does predispose to inflammation of the bronchi and lungs, irrespectively of such pneumonia as results from the entrance of food particles through an unguarded rima glottidis.

[1] Annals of Surgery, vol. xxii., 1895.

WATER-SUPPLY AT PONTYPRIDD.—At the meeting of the Pontypridd District Council held on July 25th it was reported that there was very little water for flushing purposes and that water was very scarce throughout the district.

THE INEBRIATES ACT.—At the Tredegar (Mon.) Police-court on July 25th Mr. W. E. Williams, F.R.C.S.Edin. J.P., in discharging a woman who had been convicted about 300 times for drunkenness, said that he did not consider she was a proper person to be sent to gaol and added that although the Inebriates Act had become law the county authorities had made no provision for its enforcement.

Reviews and Notices of Books.

The Anatomy of the Central Nervous System of Man and of Vertebrates in General. By Professor LUDWIG EDINGER, Frankfort-on-the-Main. Translated from the Fifth German Edition by WINFIELD S. HALE, M.D., PHILO LEON HOLLAND, M.D., and EDWARD P. CARLTON, B.S. Illustrated with 258 Engravings. Philadelphia, New York, Chicago: The F. A. Davis Company. 1899. Pp. 446.

THE structure of the human brain has been almost exhaustively treated in the text-books of Quain and Sharpey and Foster in this country and in those of Henle, Meynert, Kölliker, and Déjerine in Germany and France, but it would be difficult for the student who seeks to trace the course of the development of the central nervous system in the different classes of the vertebral sub-kingdom to obtain the information which he requires without the perusal of many works, some of which are not easily accessible except in cities where there are large libraries. The book before us is a well-executed attempt to supply this defect and to give the investigator in the first place an account of the methods of research that are or have been in use, the present conceptions of ganglion cell and nerve in regard both to their structure and function, then to supply him with an accurate account of the embryology and comparative anatomy of the vertebrate brain, and finally to give a special account of the central nervous system in man. The older anatomists endeavoured to unravel the intricate structure of the brain and spinal cord with scalpel and forceps, but the foundations of the modern methods were laid by Stilling who gave a graphic description of his discovery which is quoted by Professor Edinger. Stilling allowed a piece of cord to freeze and made a section of the frozen mass. "When I brought this under the microscope and with 15 diameters magnification beheld the transverse commissural fibres," he says, "I was conscious of having found a key which unlocked the secrets of the wonderful structure of the spinal cord. Archimedes did not more joyfully shout 'Eureka!' than did I at that sight." The hardening of tissues with chromic acid and its salts was the next step which was made by Hannover and Eckhard. Gerlach introduced the process of staining red with carmine. Golgi blackened the cells with chrome silver and Nissl and Weigert and Ehrlich and many others have carried the process of staining with different dyes to a very high degree of excellence. Other methods of tracing the course of fibres have proved of great service, such as the Wallerian method of degeneration and the study of embryological development. By these different procedures the structure of the centres and the histological characters of the nerve constituents, including the cell with its neuraxon, neurites, and dendrites, and the intervening glia have been fairly ascertained though doubtless there is still much to be learned.

The second part of Professor Edinger's treatise is a review of the Embryology and the Comparative Anatomy of the Vertebrate Brain. The progressive growth and development of the several parts are given in some detail, as exemplified in typical specimens of the fish, reptile, bird, and mammal. The author selects the brain of the lizard and cyclostome fishes by which to follow out the earlier embryonic changes and contrasts these changes with the adult condition of the brain and ganglia in the higher vertebrates. He remarks that an imperfect idea is usually entertained of the great size of those parts of the nervous system which are in connexion with the cranial nerves among lower vertebrates. Sections through the medulla oblongata of fishes show that this is for the most part simply the origin of the great cranial nerves.

The consideration of the embryology of the brain brings out points of far-reaching interest, for the development of the several convolutions has now been very thoroughly worked out with the unexpected result that the brain does not develop equally as a whole in different individuals, nor can the intellectual powers of two persons be compared or contrasted by a mere determination of the total weight, for the several embryonic fissures and convolutions make their appearance at various periods in different individuals and may present a very different configuration as development proceeds. The cortex of the brain, the organ of the higher intellectual activity, is, in fact, variously expanded in different individuals even from the first or, as Professor Edinger terms it, even in the fundament. Hence a man may become pre-eminent in some special art or walk in life, such as music, painting, sculpture, or oratory, or may be a mechanical genius without necessarily being the possessor of a large brain. These characters may be based upon very small local increases of special cortical areas. Gambetta's brain, for example, had the speech area uncommonly well developed but the brain as a whole weighed but little above the average. Professor Edinger states that his observations in a not inconsiderable number of instances are confirmatory of the opinion first advanced by Perls that a comparatively large number of men who are intellectually eminent give the impression from their type of face that they may have had a hydrocephalus in early childhood from which recovery had taken place but which owing to the less resistance presented to the growth of the brain allowed that organ to enlarge and develop more freely. This must not, of course, be taken to imply that all men of high intellectual attainment are healed hydrocephalics or that a healed hydrocephalic must have as a consequence a better developed brain.

Professor Edinger dwells at some length and with approbation on the interesting line of research opened up by Kaes who has demonstrated by careful and repeated measurements that the cerebral cortex increases in richness of fibres for a long time, even up to, and beyond, the fortieth year. Just below and running concentrically with the surface of the convolution is a white line described by various authors as the line of Gennari, of Bechterew, or of Vicq d'Azyr. It is particularly conspicuous in the cuneus and is composed of white inter-radial fibres and there is good reason for believing that these are all new association pathways, or at least pathways which, only called into use late in life, become medullated at a more advanced period. It is possible also, he observes, that we are concerned with collaterals which with the greater demand consequent upon increased associations now attain their complete development. Such a development may serve to explain the larger brain power and the more varied faculties of advancing years which continue to improve till the cells themselves begin to atrophy. The course and disposition of many sets of fibres are very fully given, amongst which may be mentioned those proceeding from the nucleus caudatus to the thalamus, the fibres of the anterior and posterior commissures of the striæ longitudinales, and many others.

It is clear from a perusal of this treatise that the structure of the brain is slowly becoming understood and that ultimately by combination of the several methods of anatomical investigation, staining with different dyes, embryology, pathology, and experiment, a thorough and accurate knowledge of the central nervous system will be obtained. Great praise is due to Professor Edinger for the clear exposition which he has given of all that is at present certainly known of the structure of the brain and for the excellent manner in which the statements made in the text are illustrated. The translation executed by Dr. Hale, Dr. Holland, and Mr. Carlton renders into good English Professor Edinger's German.

An American Text-book of Diseases of the Eye, Ear, Nose, and Throat. Edited by G. E. DE SCHWEINITZ, M.A., M.D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia; and B. ALEX. RANDALL, M.A., M.D., Clinical Professor of Diseases of the Ear in the University of Pennsylvania. London: The Rebman Publishing Company, Limited. 1899. Part I., Diseases of the Eye. Pp. 618.

THIS is a work written in the manner that is now the fashion in which the several parts of the eye and ear are committed to the hands of gentlemen who are supposed to have devoted special attention to them. Thus the subjects of the embryology, anatomy, histology, physiology, diseases and injuries of the eye are collaborated, as it is termed, by no less than 24 authors. The corresponding sections on the ear are written by 14 authors and those on the nose and throat by 19 authors. The advantage to the student of this sub-division of labour is supposed to be that he "gains the point of view of a number of teachers, reaping, in a measure, the same benefit as would be obtained by following courses of instruction under different teachers." It is difficult to see how this is effected. If each of the 24 authors who treat of the anatomy and pathology of the eye were to treat the eye as a whole the statement would be correct enough, but it is not clear what advantage is gained by committing to the very capable hands of Dr. Swan Burnett, for example, the Diseases of the Cornea and Sclera, and to those of Dr. Hopkins the Diseases of the Crystalline Lens. Both articles are well written but probably either of these two gentlemen would have accepted, had it been offered to him by the editor, the subject written upon by the other. The subjects of Refraction and of Histology might, indeed, have been placed in different hands from those dealing with the diseases of the eye because they almost constitute separate pursuits and require almost a special education, but apart from these we scarcely see the object of such a minute sub-division of work. The section on General Optical Principles, including Katoptrics, Dioptrics, and Physiological Optics, written by Dr. William Dennett and Dr. Colman W. Cutler, is not only one of the most complete but the best exposition of the subject which we have seen and is highly creditable to the authors.

It is stated in the preface that the novel features of the work (which are not usually found in text-books) are special articles on Colour Blindness and on the Standards of Form and Colour Vision Required in Railway Service, by Dr. J. Ellis Jennings of St. Louis and Dr. A. Thomson of Philadelphia; the Roentgen Rays in Ophthalmic Surgery, by Dr. Sweet of Philadelphia; the Practice of Ophthalmic Operations on Animals' Eyes, by Dr. Clarence Veasey of Philadelphia; and the Most Important Micro-organisms having Etiological Relationship to Ocular Disorders, by the editor, Dr. G. E. de Schweinitz. Dr. Sweet, in the chapter on the Employment of the Roentgen Rays, shows how the position of a fragment of metal in the interior of the eye can be demonstrated with sufficient precision to enable an operation to be undertaken for its removal. For this purpose two radiographs are so arranged as to exhibit the shadows of two rods which act as indicators of the body in the eyeball or orbit. Several woodcuts show very clearly the principles on which the location of the foreign body is determined. Considerable prominence is given in the text to the various micro-organisms that are found in different forms of conjunctival and corneal inflammation, whilst in the appendix Dr. de Schweinitz enumerates and supplies the diagnostic characters of all those that have been clearly recognised. The volume on the Eye is handsomely got up, is printed with great care on excellent paper, and has good illustrations. It is to be regretted that an index for each volume has not been separately printed.

Evolution by Atrophy in Biology and Sociology. By M. JEAN DEMOOR of Brussels, M. JEAN MASSART of Brussels, and M. EMILE VANDERVELDE of Brussels. Translated by Mrs. CHALMERS MITCHELL. London: Kegan Paul, Trench, Trübner, and Co. 1899. Pp. 322. Price 5*s*.

EVOLUTION is usually associated with development and it seems almost a misnomer to speak of evolution by atrophy, which represents degeneration, decline, and decay. Yet the authors of the present volume have made out a very good case for their views both in regard to biology and to sociology, and the parallelism which they have shown to exist between the phenomena presented by individuals and societies is very remarkable and interesting. They show, for example, that in the adaptation of the plant or the animal to its environment all modification is necessarily attended by degeneration. The changes which are observed in the submerged leaves of aquatic plants as compared with the sub-aerial leaves seen in ranunculus, the modifications of the leaves in nepenthes and sarracenia, the development of tendrils in climbing plants, the adaptation of the hind limbs in rodents for leaping—traceable through all its stages from the five-toed type seen in rats and squirrels, through the four-toed hare, the three-toed viscacha, capybara, and agouti; or, again, in the marsupials from the five-toed opossum, through the phalanger, kaola, hypsiprymnodon, perameles, and kangaroo, to the almost total abolition of all but the fourth toe in chæropus—show that with the successive development of special parts progressive degeneration of others takes place. Corresponding modifications of the limbs may be seen in aquatic and land birds. Facts of this nature are not unfamiliar to our profession, but the changes which occur in communities and states are less frequently brought under our notice. Yet the authors show clearly that institutions, like plants and animals, undergo evolution, and that each step towards progressive evolution, whilst it is associated with increased specialisation of one part, is invariably accompanied by degeneration of another. Taxes and duties, for example, replacing in the modern financial system the revenue which in the feudal system was drawn from the Crown lands, at one time constituted the only resources of the sovereign, but have now dwindled till they form a very small part of the whole. Again, just as in plants and in animals there are rudimentary organs and survivals which are the vestiges of organs that were once functionally active and important, so in their customs and ceremonies social organisms which are flourishing and in full activity retain the memory of their origin. Just as the scanty hair of the general surface of our bodies represents the hairy skin of our remote ancestors so the old Norman French in which the official in the House of Lords ratifies Acts of Parliament, such as, for assent, "La regne le veult," and for dissent "La regne s'avisera," and the creation at the coronation of two knights from amongst the gentlemen of the Privy Council to represent the dukes of Aquitaine and Normandie are survivals of the time when England was an appanage of a continental power. The authors show that an institution or an organ which has once disappeared never re-appears, even if reduced only to a vestige it cannot be re-established or resume its former function, and it cannot assume fresh functions. Degenerative evolution is brought about by a limitation in means of subsistence either in nutriment, capital, or labour. In biology natural selection plays a primary part: in sociology artificial selection is the dominating agent.

In conclusion we may remark that the translation by Mrs. Chalmers Mitchell is very well executed, especially since it involved the rendering into English of words and expressions belonging to two different branches of knowledge.

JOURNALS.

The Journal of Anatomy and Physiology. Conducted by Sir WM. TURNER, F.R.S., D. J. CUNNINGHAM, F.R.S., G. S. HUNTINGTON, M.D., A. MACALISTER, F.R.S., and J. G. M'KENDRICK, F.R.S. Vol. xxxiii. Part iv. July, 1899. London: Charles Griffin and Co. Price 6s.—The following articles are contained in this number of the journal. 1. A System of Perivascular Lymphatic Cylinders and Capsules in the Morbid Amnion-Allantois of the Chick: Morphology and Use, by C. Creighton, M.D.Aberd., with two plates. 2. The Morphological Significance of Certain Fissures in the Human Liver, by Professor Arthur Thomson, Oxford. The author shows that the appearance of anomalous fissures and clefts on the under-surface of the right lobe of the adult human liver can be accounted for by a reference to its fœtal condition and a comparison with the arrangement of the lobes in the anthropoids. 3. On the Topographical Anatomy of Abdominal Viscera in Man, especially the Gastro-intestinal Canal, by Christopher Addison, M.D.Lond., with two plates. The article gives the results of numerous measurements and is deserving of careful study by all those who are interested in abdominal surgery. 4. On the Cerebellum of the Horse, by O. Charnock Bradley, Lecturer on Anatomy, New Veterinary College, Edinburgh. 5. On the Post-embryonal History of Voluntary Muscles in Mammals, by Alexander Meek, M.Sc. Durham. Voles, cats, and rats were examined with the result that the author has satisfied himself that during extra-uterine life the growth of voluntary muscles is characterised by a decrease in the number of fibres, with an increase in the size of the surviving fibres. 6. On a Modification of the Rutherford Microtome, by David Fraser Harris, M.D.Glasg. 7. On Proteid Digestion in Ammocœtes, by R. Alcock, Bathurst student of Newnham College, Cambridge. The ammocœtes appears from this research to secrete both from the whole length of the intestinal canal and from the skin a proteid digestive ferment—that is, of the nature of pepsin rather than trypsin. 8. On the Origin of Vertebrates deduced from the Study of Ammocœtes, by Walter H. Gaskell, F.R.S., Part 4. This part deals with the thyroid or opercular segment and the meaning of the facial nerve. 9. A Radiograph (with plate) of an Injected Full-term Fœtus, by Charles I. Musgrove, scholar in Anatomy and Physiology, St. Thomas's Hospital. The injecting material was mercury and the radiograph was taken by Mr. F. H. Glew. 10. Sir W. Turner describes a Rare Form of Palatal Suture. 11. Archæologia Anatomica: Tendo Achillis—a term which the author traces to Vesalius.

THE PREVENTION OF TUBERCULOSIS.

(Continued from p. 285.)

LEICESTER AND LEICESTERSHIRE BRANCH OF THE NATIONAL ASSOCIATION FOR PREVENTION OF CONSUMPTION.

As the outcome of a large and representative gathering held in Leicester in the spring an influential executive committee has now been formed with Sir Thomas Wright as chairman. This committee, recognising the great importance of obtaining a "safe" milk-supply, especially for the great number of children in the manufacturing district, have drawn up a series of suggestions to be inserted into contracts made for the supply of milk. In one instance these suggestions have been adopted and it is certain that other public bodies will insist upon them. As will be seen, these suggestions closely follow the findings of the Royal Commission on Tuberculosis. Besides this the committee are making arrangements for lectures to be delivered in different parts of the county on the Prevention of Tuberculosis. In Leicester, Melton Mowbray, and Market Harborough addresses have already been given and the interest taken in them leads the committee to hope that considerable benefit will arise therefrom. The desirability of erecting sanatoria is a matter that is receiving careful consideration.

Suggestions for a Form of Contract to Ensure the Supply of "Safe" Milk.

1. The contractor agrees that the milk shall be obtained only from cows guaranteed by a qualified veterinary surgeon to be free from disease of the udder.
2. The contractor guarantees to furnish monthly reports from a qualified veterinary surgeon that the cows remain free from disease of the udder and are kept under proper sanitary conditions.
3. If the contractor continues to keep a cow after it has been reported to be suffering from disease of the udder it shall be held to be *primâ-facie* evidence that the milk from it is used for the purpose of supplying milk under this contract.
4. The contractor undertakes that any person suffering from, or who has recently been in personal contact with, a person suffering from any dangerous infectious disease within the meaning of the Notification Acts, or who is himself suffering from consumption, shall not take part in any dairy operations.
5. The contractor agrees and guarantees that the milk supplied under this contract shall in all cases contain not less than 3·2 per cent. of fat as ascertained by analysis.

HEREFORD.

At the meeting of the Hereford Board of Guardians held on July 15th a communication was received from the guardians of St. Saviour's Union, Surrey, stating that a conference had been held respecting the Poor-law relating to paupers suffering from tuberculosis, when the following resolution was adopted and this board was also asked to agree to it:—

That having regard to the large number of cases of tuberculous (phthisical) diseases which find their way into establishments under the care of Poor-law guardians it is desirable that the Local Government Board be asked to make an exhaustive inquiry into the causes and treatment of the same.

The Rev. A. J. CAPEL proposed that the resolution be adopted and, the VICE-CHAIRMAN seconding it, it was agreed to communicate with the Local Government Board as suggested.

TROWBRIDGE.

A small but influential meeting under the auspices of the West Wiltshire branch of the National Society for the Prevention of Consumption and other Forms of Tuberculosis was held at Trowbridge on July 29th. Captain Chaloner, M.P., presided and was supported by the Bishop of Salisbury, Dr. E. Markham Skerritt, Dr. F. R. Walters, and others. Dr. Markham Skerritt alluding to a special report on tuberculosis presented to the Health Committee of the Bristol Town Council by Dr. Davies, and said that during the last 10 years the seven principal zymotic diseases caused 4673 deaths in Bristol while 3520 were credited to pulmonary consumption alone and the deaths from tuberculosis as a whole amounted to 4876 in the same period, or more than those for the zymotic diseases put together. One death in every nine was due to some form of tuberculosis and one in every 12 to consumption of the lungs. The Bishop of Salisbury also spoke suggesting the Wiltshire downs as an admirable site for a sanatorium. On the motion of Mr. C. Awdry, seconded by Sir John Wallington, it was agreed to amalgamate Gloucestershire, Somersetshire, and Wiltshire for the purpose of making a joint effort against tuberculosis.

NEW SOUTH WALES MEDICAL UNION.—The sixth annual report of this association states that during the period 1898–99 several matters of importance affecting members were brought under the consideration of the Council. A member was committed for trial for manslaughter by a coroner's jury in a case where a patient died from hæmorrhage after curetting. The Council after inquiry decided to assist the member pecuniarily and otherwise, but owing to there being no evidence to support the charge the Attorney-General declined to file a bill. Another member was threatened with an action in consequence of death occurring during the removal of the placenta in a case of abortion in the fourth month. In the result the threatened proceedings were abandoned. The association has 271 members and funds in hand amounting to £1052. The office of the union is at 121, Bathurst-street, Sydney.

THE LANCET.

LONDON: SATURDAY, AUGUST 5, 1899.

THE President of the British Medical Association, at its sixty-seventh annual meeting, would need to be endowed with rare originality to find anything new to say to the members. Dr. WARD COUSINS'S predecessors have often got over the difficulty by giving a sketch of the history of the town in which the meeting was held. And many Presidents have had a worse excuse than he for that kind of address. For few towns go further back in their associations with our national history than does Portsmouth, which is mentioned in the Saxon Chronicle at the early date of 501 A.D. and which received its first Charter from RICHARD CŒUR DE LION. But Dr. WARD COUSINS, speaking in the last 18 months of the century, thought fit—and very naturally—to take for his subject the Century's Progress in Medicine and Surgery. In doing so he was a little scanty in his justice to some of the pioneers in the last century and the century before; he was certainly hard on the medical profession in its natural, if sometimes excessive and short-sighted, opposition to new ideas and discoveries; and he displayed rather too much disposition to despise drugs which it is not probable that any discoveries in biology or medicine will readily supersede. Moreover, Dr. WARD COUSINS'S address was not quite free from confusion of dates and groups of persons, from partialities and prejudices, and from singular omissions in his enumeration of the great forces and personalities of the profession. With these qualifications the presidential address of 1899 constitutes a useful account of the chief lines of progress. Dr. WARD COUSINS has done rough justice to the different divisions of the United Kingdom and to other nations. A perusal of his address will not add much to our knowledge of the history of events or of the character of the chief actors in the great drama. For this purpose it would be necessary to be less ambitious, to take a limited part of the century, or to study a definite piece of work by itself. To take a whole century—and such a century—into his purview and to attempt to do justice to so vast a range of work from the introduction of vaccination to the discovery of the Roentgen rays is to run the risk of undue length for one thing and of superficiality for another.

Dr. WARD COUSINS gave EDWARD JENNER his meed when he said that whereas in the eighteenth century nearly everyone was marked with small-pox the disease is now almost exterminated. As was to have been expected he noticed the recent singularly disappointing legislation on the subject of vaccination and with sanguine words expressed confidence that the voice of the medical profession will never cease to sound the alarm and that the British Medical Association "will never hesitate to put forth all its influence and strength until the adversaries of sanitary progress have been defeated and the old enemy slain again at our gates." We could wish that the President had devoted more time to the consideration of this subject and of the duty of the Association in reference to it. The Association has a great responsibility in this matter, as one of its Vice-Presidents was one of the most active agents in procuring the reversal of legislation and of introducing into the courts the "conscientious objector." If the Association has one duty more binding upon it than another it is to represent the almost unanimous opinion of the profession on the dangers of the present state of the law to the public health, the disappointment of the profession with the non-performance of the promises of the Ministry with reference to the enactment of a law of revaccination, and last, but not least, the singular and undignified duties which are imposed by the Act of 1898 on public vaccinators.

Perhaps the best part of Dr. WARD COUSINS'S address was the last, in which he discussed the future progress of preventive medicine and forecast a steady and great decline in the death-rate in the coming century. For the realisation of this great object he looked above all, and rightly looked, to an improvement in the conditions and in the dwellings of the working-classes. And he was especially right in pointing out that this improvement cannot come from mere legislation. "The great mass of the people must become willing and active helpers," he said, and in equally true words he showed how largely the prevention of suffering and the preservation of health are within the reach of the working-classes in our great towns if they will only cultivate temperance and cleanliness. When we, as a profession, have instilled these notions of duty into the working-classes and provided them with what State assistance is possible we shall have rendered to them incalculable service.

THE Address in Medicine at the annual meeting of the British Medical Association is always listened to by those present, or subsequently read by those who were unable to attend, with an unusual amount of interest. This, we are certain, is because as a rule the Council of the British Medical Association invite a physician justly famed for his clinical experience to be responsible for the most important plenary address of the annual meeting. This year there has been no exception to the rule. Sir RICHARD DOUGLAS POWELL adds to his clinical experience a power of discriminating between what discoveries may or may not be of eventual value to the practitioner. Never lacking in eagerness to make a practical trial of any new method of treatment, yet, as he plainly shows in the address which we publish in our columns to-day, he avoids the tendency, always so natural, to rush to conclusions and to claim for some new theory or therapeutical method merit which longer experience shows to be unfounded. This laudable caution was well exemplified in some of Sir RICHARD DOUGLAS POWELL'S earlier remarks, such as the references to the temptation which has arisen to supplant the ordinary method of feeling the pulse by various forms of instruments which may be valuable in the hands of experts but are of doubtful use in general practice. His observations on the use of the clinical thermometer will no doubt be fully echoed by clinicians. He remarked

that not long ago the thermometer was regarded almost as a divining rod—a sole and sufficient indicator in febrile affections, and the temperature, mistaken for the disease, had been pursued round the dial by antipyretic medication, and he pointed out that it is only comparatively recently that we have fully recognised that it is merely the exuberances of temperature or the abnormal effects produced upon the nervous system of individual patients by temperatures otherwise normal to diseased conditions that can be wisely treated by antipyretics. Observations of this kind are most valuable in warning young practitioners to distinguish carefully between symptoms and disease and not to regard as distinct maladies the phenomena dependent on some morbid process.

The attractive subjects of susceptibility and immunity were duly considered and stress was laid upon the fact that we carry about with us in our accessible mucous tracts, and especially in our naso-oral and respiratory passages, "amidst other unconsidered trifles and as yet unclassified germs, samples of the organisms specific to many diseases." It is now fully acknowledged that it is not enough to have the poison germ on the one hand to acquire the disease on the other. There are intermediate or antecedent circumstances of dosage, acquired susceptibility, or that subtle malformation of tissue in certain organs which is inherited and renders them weak in resistance to certain forms of attack. If some local or general alteration occurs in our chemical or vital functions one or other of these organs may embrace the opportunity for aggressive cultivation. Sir RICHARD DOUGLAS POWELL aptly illustrated these statements by reference to that most frequent and disagreeable malady—a common cold. Acquired by a momentary chill a catarrh becomes at once a highly contagious disease and will "run through the house." There can be no doubt that the catarrh is associated with the cultivation of an organism; it is equally probable that that organism must have pre-existed in some part of the nasal surface; and he asked the question, "Does some vaso-motory disturbance bring about the local conditions of increased heat and moisture needful for that particular form of microbe cultivation, or is it merely depressed vitality that makes the host susceptible?" Herein lies a field for observation that singularly enough has been strangely neglected, although the material for investigation is always at hand. As Sir RICHARD DOUGLAS POWELL remarked, "it is the type of a large number of more important diseases, and carefully investigated it would, I believe, be fruitful in sidelights upon their etiology and prophylactic treatment."

Sir RICHARD DOUGLAS POWELL'S work being what it has been, his words on the prevention and treatment of tuberculosis will naturally receive a large amount of attention. It might be urged, he thought, with some justice that we in this country had been behind our Continental friends in grasping the full significance from a prophylactic point of view of the discovery of a definite infective bacillus, and he then went on to say: "For our sins in this respect and perhaps in part because there are political and commercial as well as human interests concerned in the further measures necessary, the question of the prevention of consumption, which should have been calmly and forcibly considered as heretofore by experts in human and veterinary medicine, has become the subject of popular agitation with all the reckless exaggeration and no little threatening of the social tyranny which such agitations tend to produce." These are forcible words, but, we believe, none too strong. We have already expressed our views on the movement to which the speaker referred and we have strongly insisted that there is a danger of outstepping prudence by the introduction of measures which some of the more advanced advocates of "notification" and "segregation" and the like would wish the nation to adopt. The broad-minded summary of the proceedings at the Berlin Congress upon the Prevention of Tuberculosis by Dr. PYE-SMITH which we published in THE LANCET of July 15th, p. 177, received Sir RICHARD DOUGLAS POWELL'S favourable comment, and the hope was expressed that the work of this Congress might bring the matter again within the sphere of practical politics on the part of medical men and the State departments. Another matter which was referred to in the address is the tendency which is rapidly gaining ground to minimise the influence of heredity as an etiological factor in tuberculosis. "To set heredity at nought, to regard climatic considerations as of no importance, and to state that the disease is always acquired by direct contagion or infection is, in my opinion, to ignore much that is true and to magnify that which should be carefully guarded from exaggeration." Sir RICHARD DOUGLAS POWELL brought an array of arguments, necessarily in brief, to support his contentions, and once again he exhibited his dislike to form conclusions too speedily from scientific facts to the exclusion of clinical experience. He justly remarked that "life assurance offices, whose calculations are based upon experience, will probably wait for much further evidence against the heredity of phthisis before they will feel justified in accepting without surcharge the lives of those who present a consumptive family history." In conclusion, he gave food for reflection by suggesting that the tuberculous organism, like those of actinomycosis, tetanus, and anthrax, may have an independent and pre-parasitic existence and that, like malaria, tuberculosis will possibly be found to have a double origin from purely microphytic as well as from parasitic infection. Here, again, is a large field for research and in making these suggestions Sir RICHARD DOUGLAS POWELL may have stimulated investigators by indicating the lines upon which experiments might be made with promise of great results.

PORTSMOUTH, as everybody knows, is a great naval and military centre. It has many grand traditions connecting it with the naval history of this country in the past and it is intimately associated with the sea forces and various institutions of the Royal Navy in the present. Portsmouth has, moreover, numerous forts and a large military garrison. Professor OGSTON, the Surgeon-in-Ordinary to Her Majesty in Scotland and Regius Professor of Surgery of the University of Edinburgh, in his Address in Surgery at the annual meeting of the British Medical Association at Portsmouth on August 3rd therefore felt

very naturally that the occasion and place were specially appropriate for considering the condition of our naval and army medical services—more especially in relation to the profound impression and revolution in surgical practice which Lord LISTER'S discoveries have brought about and the marvellous benefits which these have conferred on the world at large, and in particular on the profession to which we belong. It is not too much to say that these discoveries have changed the whole aspect and bearing of matters, not only in relation to diseases and injuries, but to medical and sanitary science in general. That this is so is well-nigh universally recognised by all who are really competent to form any opinion of scientific value. Fresh fields for relieving and curing disease and injuries have been opened up at every point of our horizon, and further discoveries in matters of detail and methods of procedure are sure to be made hereafter, rendering the application of the principles of Listerism of even more easy and universal application than at present.

What we have to do in the meantime is to ascertain whether all has been done that can be done to bring the benefits which such discoveries have indubitably conferred on humanity within the reach of all and more particularly within the reach of our public medical services responsible for the care and treatment of our soldiers and sailors in time of war. Nor is the consideration of this subject circumscribed within these limits; it extends to, and takes in, all that concerns the medical administrative and hygienic aspects of modern warfare; and the question arises whether our present systems, arrangements, and provision of men and material are likely to prove as satisfactory as they might be in war with a European power. This is a momentous question which Professor OGSTON has boldly faced and discussed in his address at the British Medical Association meeting with such a vigour and plainness of speech as to leave no doubt whatever about his own opinion in regard to it. He speaks, it must be borne in mind, with some personal knowledge and experience of war. The naval and military medical services, in his judgment, are in a very unsatisfactory condition, and great reforms are necessary in order to fit them to undertake properly or adequately the duties which they will be called upon to discharge in any big war, i.e., if the sick and wounded are to be ensured those benefits of applied surgical science which are now, through the instrumentality of our various civil hospitals and institutions, brought within reach of the humblest and poorest. There is no need to consider all the points brought forward by Professor OGSTON, for our readers will peruse his address for themselves. We may, however, briefly recapitulate and summarise some of his points. It is, he contends, only a moderate and reasonable standard to expect that the officers of the medical services of the navy and army should be as favourably placed as their civil brethren in regard to their professional work and that they should not only be able to perform their duties efficiently in peace but be prepared for the eventualities of war. The most talented medical graduates of our universities and schools have of late years almost ceased, he alleges, to enter these services; the Royal Army Medical Corps he holds to be undergoing deterioration owing to the proportion of good and eminent men entering it being less as compared with former times and to the fact that although some of the best men in the profession are in the ranks of the services, and that many of them carry out work of the highest order, they do so because of their own force of character and intellect and not because of any opportunities and encouragement which they have had in the medical services for their professional work and ability.

Nowadays, no one, let his abilities be what they may, can become an eminent or successful surgeon without special training of a very practical kind. He cannot step into the arena as a practical surgeon simply on account of his intimate theoretical acquaintance with surgical doctrines and science, and the hospitals and practice of the public medical services in time of peace do not afford the requisite opportunities to medical officers of the navy or army for doing anything like all that is required to enable them to keep abreast with the rapid progress of surgical and medical knowledge. Professor OGSTON, after adverting to the several medical services of the navy and the British and Indian armies, institutes a comparison between them and the medical services of Germany, Russia, and France. He gives a brief but excellent description of all that has been done in those countries with the object of organising and training their medical officers in times of peace for the eventualities of war. The address bristles with suggestions of all kinds which claim considerate attention and invite more comment and criticism than we can pretend to give them at present. We sympathise with the aim and object of the address which contains many points for which we have contended long ago. We have always held that the Army Medical Service is essentially a scientific service and one that should take its stand on a professional platform, but to be efficient it *must* have command over everything appertaining to its own work. In order to obtain the highest practicable efficiency it should, as far as practicable, rehearse in peace the functions which it will have to discharge in war. Field hospitals should be organised on the lines of a battery of Royal Artillery and be complete themselves in every respect. The medical service should during war have its own transport set apart for it and for the conveyance of its medical stores, and in everything relating to a sick and wounded man it should be paramount.

It is only fair to say, however, that the differences between this country and continental countries make a comparison between our naval and army medical services and theirs very difficult; and, however much remains to be done in view of modernising and perfecting our services, a great and progressive improvement has nevertheless taken place, and is still taking place—which, we think, Professor OGSTON has not sufficiently realised. It goes without saying that all things necessary for modern antiseptic surgery should be available for our wounded sailors and soldiers; and we believe that, as a matter of fact, in all our recent wars antiseptic agents have been freely supplied and freely used, with the result that infective wound diseases have been practically banished from our service hospitals, while the health statistics

in our late expeditions will contrast favourably with those shown by any other country or with those of our own country in times gone by.

IT does not often fall to the schoolboy's lot on the great day of his school year when prizes are distributed to him or to his more deserving fellows to hear among the harangues delivered by many persons of importance invited for the occasion so admirable a speech from so distinguished a speaker as that delivered by Lord ROSEBERY at Epsom College on Saturday last. The audience on such occasions is usually a mixed one in point of ages and the speakers are not always in touch with schoolboy thought. Lord ROSEBERY was struck with the variety of constituents in the assembly before him, commented upon it with a happy allusion to SHAKESPEARE'S Seven Ages of Man, and proceeded to address himself to all in words calculated to go home to the old and middle-aged, but particularly to stir the ambitions of every schoolboy before him. Speaking of English schools he said: "At any rate we are sure of this—that in England our schools have turned out men. They have been the best schools of manhood that the world has ever seen." It was Lord ROSEBERY who at Epsom some months ago gave statesmanlike expression to the readiness of the Opposition to support Lord SALISBURY when the Fashoda incident called for the showing of a united front by the two great political parties in the kingdom, and it was Lord ROSEBERY who, again, the Fashoda incident being over, gave free utterance to English admiration of manly qualities, taking Major MARCHAND for one of his illustrations as a foreigner to whom England would always accord a reception second only to that which he had in his own country. It is, however, to the words in which Lord ROSEBERY spoke of the medical profession, peculiarly appropriate to the surroundings in which he found himself, that we wish to call special attention, not without an expression of gratitude to the speaker. The point of view from which he approached this branch of his subject may have struck some of his hearers as novel. The men among them not members of the medical profession may have expected to hear it associated with the triumphs of science or the alleviation of suffering, to which latter, indeed, Lord ROSEBERY referred. The schoolboy destined for it may have had various inducements to contemplate it or may have had it selected for him, but neither man nor boy probably thought of it as requiring "more stubborn and obdurate courage than any other," or of a member of it as "fighting one life-long battle in which he knows that he must be beaten" in a profession that is "one long struggle in which, like the Englishman, he must never know when he is beaten until victory has gone against him," and which "in its essence contains, perhaps, the most supreme elements of manhood of all the professions."

Yet so it is, and we may fairly say that whatever may be the changes that have been made or that, as Lord ROSEBERY hinted, may be desirable in the traditional curriculum of an English public school the traditions that make for manliness, the sense of honour, the self-reliance, the independence of magisterial discipline out of school hours, coupled with the authority and responsibility entrusted to those boys whose position in the school have earned it,—all these have not been diminished and are not sought to be diminished, but have, on the contrary, as those who know our public schools are well aware, largely increased in strength and efficiency during the past 50 years. Bullying, an unmanly and cowardly vice, has almost disappeared; indeed, as compared with what went on half a century ago it is a thing of the past. Athletic sports have enormously increased in importance; some will say that they have done so to too great an extent, but everyone will admit that however great may be the position assigned by a schoolboy to the best bat in the cricket eleven or the most dashing forward in the football team it is the boy who combines these proud positions with the fact that he is head of the school or at least a conspicuous member of the sixth form who is the hero looked up to by all and a person of considerably more importance than any of the masters who probably instruct him both in learning and in sport. It is the feeling which earns him this position among his fellows that encourages them to emulation of his prowess, and it is the spirit of h nest emulation among boys that is roused by such a speech as Lord ROSEBERY'S to something that will endure in them when they are men. As Prime Minister, as chairman of the London County Council, and in many other capacities Lord ROSEBERY has shown his grasp of many subjects, his sympathy with scientific progress, and his own manly qualities; but he can hardly have ever been more in touch with any of the many audiences to whom he has addressed himself than he was with those who cheered his words at Epsom College, while the contact will have been in a large measure extended to those who have studied them in print.

Annotations.

"Ne quid nimis."

MR. CHAPLIN'S OYSTERS BILL.

IN an annotation as to this measure which appeared in THE LANCET of July 29th we anticipated that we might have something further to say when the report of the Select Committee of the House of Lords, which was appointed to consider it, appeared. The report has not yet been issued, but we have procured a copy of the Bill as amended by the Lords' Committee and we have been furnished with a local paper which contains the greater part of the evidence put before that committee by the witnesses. It is, therefore, no surprise to us to see that Mr. Chaplin has elected to withdraw the Bill rather than allow it to be converted into a trade protection measure. The Bill was introduced into the House of Lords with the intention of protecting the public against contracting enteric fever or attacks of gastro-enteritis from the consumption of polluted oysters, and as such it was a measure which would undoubtedly have effected important reforms in the oyster industry. Lord Harris, however, into whose charge the Bill was apparently entrusted, seems, with the other members of the Select Committee, to have regarded the Bill as being concerned more with the health of the oyster than with the health of the human being, and acting upon this view they so "amended" the Bill as to place its administration into the hands of the Sea Fisheries Committees—i.e., bodies

concerned purely with fishing and licensing matters and containing in their composition some 50 per cent. of persons interested in the fishing industry. These committees have no concern whatever with the public health and they possess no advisers capable of guiding them in that direction. As far as we have been able to gather, the work of the Select Committee seems to have been performed in a somewhat perfunctory manner. In the first place, they decided to accept as proved the fact that illness can at times be caused through the agency of oysters; they expressed themselves as satisfied with the evidence on this point. We are afraid, however, that the Committee were content with very insufficient evidence, since the questions which they put to the witnesses did not as a whole indicate that intimate knowledge of the subject which conviction by means of the consideration of evidence would be likely to engender. But what perhaps is the most remarkable fact in connexion with the doings of the Committee is that they amended the Bill in the direction of conferring its administration upon the Sea Fisheries Committees without in the first instance endeavouring to ascertain whether the jurisdiction of these committees extended to all the estuaries in which oyster layings are found. They were, it appears, told by Dr. Bulstrode that the Sea Fisheries districts as at present constituted did not so extend in all cases and that some extension of jurisdiction might become necessary. In spite, however, of this fact—there seems to be no question that it is a fact—the Lords' Committee seem to have taken no trouble to ascertain the actual position of affairs, and without attempting to define what they mean by "Sea Fisheries Committees" or any suggestion as to what is to happen in inland districts where there are no salmon conservators, the Lords allowed their Bill to go forward as an "amended" measure, and now the Select Committee have presumably suffered the ignominy of learning from the Board of Trade that the change which they introduced into the Bill has rendered the measure impracticable. How much better it would have been for the reputation of public business in the House of Lords if the Committee had ascertained this fact before "amending" the Bill! As we ventured to predict in our last issue Mr. Chaplin has chosen to drop the Bill altogether rather than in his capacity as President of the Central Health Authority of this country to accept the mangled and impracticable measure sent to him by the Select Committee. The contention of Lord Harris, as reported in the *Times* of August 1st, that the Bill primarily concerned the oysters, is surely too grotesque, and it could only be equalled by a plea in reference, say, to a public health Bill for the prevention of the adulteration of beer that as the question was one which concerned more particularly the hops it was proposed to confer the administration of the Act upon the hop-pickers. We trust that the next public health measure which is dealt with by a Select Committee of the House of Lords will receive more consideraton than did the now defunct Oyster Bill.

THE QUEEN v. LEICESTER GUARDIANS.

"THE forty-five guardians of Leicester" sounds like the commencement of a nonsense-verse destined to rhyme with "fester," but is only intended to designate certain gentlemen and ladies who spent a hot though possibly instructive morning last week in the London law-courts. The object aimed at by them in their journey from the Midlands to the Strand is a little obscure but the occasion was as follows. The guardians of Leicester refuse to obey the law of their country which says that they "shall" appoint a vaccination officer; the Local Government Board has answered the question "*Quis custodiet custodes?*" by asking the High Court of Justice to grant its "mandamus" ordering the Leicester guardians to comply with the law. As the Local Government Board had obtained a "rule nisi" for the mandamus the board of guardians found themselves called upon to "show cause why the rule should not be made absolute" before what is known as a Divisional Court of the High Court of Justice sitting to hear cases set down in what is called the "Crown paper." The occasion, it may therefore be remarked, was one for technical argument as to the construction of statutes and the inner inwardness of decided cases rather than for the demonstration of enthusiasm by persons thirsting for martyrdom or any other form of fame. The guardians of Leicester, however, thought otherwise and 45 of them visited the metropolis and, we hope, improved their knowledge of law and procedure. One or two of them seem to have broken the sleepy stillness of the Court with cheers at one point but to have desisted on realising that if they were turned out there would be nothing for it but to go to the Earl's Court Exhibition, or return to Leicester, without hearing judgment delivered. Their counsel was Mr. Asquith, Q.C., formerly Home Secretary under Mr. Gladstone, who may, if he ever be in office again, have to deal with anti-vaccinationists. No doubt he can dissociate the views of an advocate from those of his clients—most reasonable people can—but it does not therefore follow that those who briefed him will be able to do so. Be this as it may, neither Mr. Asquith's personal views on vaccination nor those of his clients had anything to do with his argument which was, of course, a purely legal one. His main point was that the Local Government Board could themselves appoint a vaccination officer and that the mandamus of the court is not the proper remedy if the same thing can be had by another process. The answer of the Solicitor-General, adopted without much argument from him by the court, was that the appointment of an officer by the guardians was the thing sought; that this was not the same as the appointment of a vaccination officer by the Local Government Board, or, in other words, that the alternative plan to which he called their attention would not yield the same result as a mandamus would give; and that consequently the Local Government Board had rightly asked the court to order the Leicester Guardians to obey the law. The matter is probably not at an end yet. The law has been laid down with clearness where it was apparently not obscure before, but the Leicester Guardians who took a railway journey and listened to Mr. Justice Phillimore and Mr. Justice Darling will possibly seek some more picturesque method of displaying their enthusiasm. We hope they will forgive us if we suggest that that adopted last week, with the kind of publicity given to it by a section of the press, was little short of ludicrous.

KALA-AZAR.

KALA-AZAR is an epidemic disease attended with a high death-rate and especially prevalent in Assam. Though it appears to have existed for many years in the Garo Hills it was not officially noticed until 1882, when an investigation by Captain McNaught, civil surgeon of Tura in the Garo Hills, was published. After this date the disease spread up the Brahmaputra Valley and at the present time is found in the Nowgong District. It has no doubt been sometimes confused with ankylostomiasis and its pathology presents some unusual features, notably the fact that it appears to be malarial in its nature but nevertheless resists quinine and is communicable from one person to another. In 1890 Major Giles, I.M.S., published a report in which he maintained that the disease was ankylostomiasis, or rather, perhaps, "a mixed anæmia brought about by ankylostomiasis acting on a population worn down by chronic malarial poisoning." These opinions did not meet with general acceptance, and

Captain Rogers, I.M.S., in a report published in 1897 took the view that kala-azar is not ankylostomiasis but malarial fever. In February, 1898, Major Ronald Ross, I.M.S., was placed on special duty to investigate malaria and kala-azar. One result of his labours was the discovery (1) that proteosoma (Labbe), one of the so-called malarial parasites of birds, is capable of living and growing in a species of mosquito and (2) that healthy birds were readily infected when bitten by mosquitoes fed a week previously on birds containing the parasites of avian malaria. Major Ross's report on kala-azar, published by the Government Printing Office in Calcutta, is a model of clinical and epidemiological investigation and is of considerable length, extending to 87 large pages. He divides the symptoms into three periods or stages, the first of which is characterised (*a*) by recurrent accessions of acute fever separated by periods of apyrexia and (*b*) by rapid enlargement of the liver and spleen. The second stage is that of established and still acute enlargement of the liver and spleen, accompanied by constant low fever and pronounced but not excessive anæmia. The third stage is that of cachexia and when it is once firmly established recovery seems to be impossible. With respect to duration the first stage may be put at one or two months only and the beginning of the third stage at nine months or a year, or even more, from the commencement of the illness. The arguments in favour of the malarial theory of kala-azar are the facts that the symptoms are almost if not quite identical with those of malarial fever, that the disease occurs in malarious regions, and that most of the cases contain yellow pigment, the remote derivative of the pathogenetic parasites. The arguments against the malarial theory are the high death-rate, the intractability to quinine, the existence of a low constant fever in the second stage of the disease, the apparent absence of the parasites and melanin of paludism from many cases, and the communicability from the sick to the healthy. Major Ross discusses these various points very fully and in the result comes to the conclusion that kala-azar is a form of malarial fever and a form which is probably by no means confined to Assam. The question of the spontaneous extinction of the parasitic invasion in old cases of paludism deserves special attention because of its bearing on treatment by quinine.

ARSENICAL PIGMENTATION OF THE SKIN SIMULATING ADDISON'S DISEASE.

AT the meeting of the Société Médicale des Hôpitaux of Paris on June 30th M. Enriquez and M. Lereboullet described a remarkable case in which arsenical pigmentation simulated Addison's disease. The patient was a man, aged 47 years, who had been in good health until April, 1897, when an eczematous eruption appeared on the left ankle and then affected the feet and hands. On Oct. 19th under medical advice he began to take about 16 drops of Fowler's solution daily. He continued to take the solution in the same dose and in January, 1898, he felt depressed and experienced pricking and congestion of the conjunctivæ. In March he noticed that his skin was becoming black in certain parts. The pigmentation rapidly became generalised; in April it involved the whole body. In the meantime he always had conjunctivitis and lacrymation. He also complained of dryness of the throat. The practitioner who then attended him, basing his opinion on the characters of the general melanodermia which in parts assumed a bronze tint, the progressive wasting, and slight asthenia, diagnosed Addison's disease and ordered the Fowler's solution to be continued. M. Brissaud, who also saw the patient, concurred in this view and advised in addition the use of suprarenal substance. The symptoms progressed. There were crises of abdominal pain suggesting renal or hepatic colic. In June, struck by the absence of asthenia, gastro-intestinal troubles, and lumbar pains and by several special characters of the eruption, M. Brissaud requested his colleague, Dr. Gaucher, to examine the patient. The latter appeared to be robust and but little wasted. The face was very bronzed. The melanodermia was general but of variable intensity; the tint was slate or fawn colour in some places, bronze or almost black in others; as a whole it gave the impression of Addison's disease. But the pigmentation was not uniform; a large number of light-coloured spots of from the size of a pea to that of a lentil could be distinguished. In other places, on the contrary, especially in the neck, behind the ears, and at the roots of the upper limbs, highly pigmented spots were observed. The melanodermia was most marked in the groins and axillæ and at the waist and in general at the folds of flexion of the body. The hands and feet were almost exempt. On the face it was uniform, but relatively little marked. The genitals were less pigmented than other parts. The mucous membrane of the lips and cheeks was little affected. The skin of the palms and of the palmar surface of the digits was markedly thickened with numerous hard papules. The soles showed similar changes, but in greater degree. In this case the spotted character of the pigmentation, the relative immunity of the hands and feet, and the lesser degree of genital pigmentation were in favour of the diagnosis of arsenical pigmentation and against that of Addison's disease. The diagnosis was confirmed by diminution of pigmentation and other symptoms three weeks after the patient ceased to take arsenic. The marked cutaneous effect with the absence of all nervous symptoms are noteworthy and reveal a special predisposition.

THE SPHERE OF A MATRON.

AN extraordinary story is reported in a local London paper concerning the Chelsea Infirmary. A patient was operated upon by his own desire on May 24th for hernia and on June 5th the matron of the infirmary, without, it is stated, instructions from the surgeon in charge, moved the patient from the position which he had been told to occupy in his bed by altering the position of his pillows. On June 6th serious hæmorrhage took place from the wound. The board of guardians have had the matter before them, when five voted in favour of a motion that the facts should be laid before the Local Government Board and 12 negatived the proposal. This is a decision which will not inspire anyone with much respect for the board of guardians unless they supplement their refusal to seek the aid of the Local Government Board by vigorous treatment of the situation themselves. If the matron interfered with the orders given by the medical man with regard to the surgical care and nursing of a patient she is so much to blame that it is almost no exaggeration to say that she is unfit for her position. If she did not behave in the unwarrantable manner which is alleged against her in at least one local paper her character should be cleared from these aspersions. The debate upon the matter by the guardians, in the account which has come before us, shows that they have been unable to regard the circumstances in a calm and unprejudiced manner.

"KISSING THE BOOK."

AT the Lambeth County Court on July 25th a medical witness stated that "he preferred to kiss the book rather than be sworn in the Scotch method." His Honour Judge Emden was naturally surprised and according to the report in the *Globe* said:—

"This is really an extraordinary action for a doctor to take. I have myself seen persons suffering from diseases which I need not mention and which had been contracted from kissing the book while oath-taking. Physician after physician has pointed out this danger and an Act of Parliament was actually passed in 1888 to legalise the oath being

taken by uplifted hand. But, as we all know, the provisions of many Acts are not generally known and so I caused placards to be put up in this court stating that persons desiring to be sworn without kissing the book may ask to be sworn by uplifted hand, which in my opinion is the most solemn method. Since those placards were put up very few persons here have kissed the book. Take the oath in the way you consider most binding. You are the only medical man I have had before me who favoured the kissing of the book."

We have again and again referred to the danger, to say nothing of the unpleasantness, incurred by kissing a greasy book which many other persons, some of them uncleanly, have previously kissed, and in THE LANCET of Jan. 18th, 1896, referred in laudatory terms to his Honour Judge Emden's action in publicly stating that kissing the book was not necessary. However, if any man likes to do so there is no one who can prevent him, only we should like to ask those who still prefer to kiss such a copy of the Holy Gospels as is generally found in courts of justice whether they would like to kiss some of the persons who have previously kissed the book?

THE ST. JOHN AMBULANCE ASSOCIATION AND ITS STOCKPORT CENTRE.

AT last it appears probable that a limit will be set to the policy which seems to have been selected by the local secretary of this Centre as the best method of dealing with the unpleasant situation in Stockport. We understand that about a fortnight ago a formal application was made by the Medical Society of Stockport to the local chairman of the St. John Ambulance Association for an inquiry into the way in which the ambulance matters of the Association were conducted. The reply of the local chairman being evasive was sent to the Central Executive of the Association when an answer was received from Sir Herbert Perrott saying that the Local Centre must hold an inquiry first, and that until such an inquiry was held the Central Executive could not act as a court of appeal. Sir Herbert Perrott's letter went on to state that desiring a speedy termination of the "unfortunate differences" at Stockport the Central Executive were prepared to appoint as arbitrators three wholly independent gentlemen if all concerned would agree to be bound by their decision. This offer has been accepted by the medical society with the suggestion that there should be adequate representation of the medical profession on the board of arbitrators. If the local secretary now refuses arbitration he will occupy a position in the eyes of all fair men somewhat difficult to defend. If he accepts arbitration there will, we feel certain, quickly be an adjustment of the matters so acrimoniously at issue.

CROUP IN WHOOPING-COUGH.

THE croup-like symptoms which are not uncommonly associated with the early stage of whooping-cough occasionally give rise to some difficulty in diagnosis. This point was well brought out in the course of a discussion at a recent meeting of the Société de Thérapeutique of Paris. On this occasion M. Gallois described by the term *laryngite coqueluchoïde* a condition of croup which is most prevalent among children, though found also in adult life, and which subsequently runs a course practically identical with that of whooping-cough. He attributes it to a form of laryngeal congestion and thinks that post-nasal adenoids play an important part in its production. In face of the fact that true pertussis usually originates in a species of laryngitis this explanation appears to us to be somewhat strained. We would rather endorse the view of another speaker at this meeting, M. Castel, and say that the presence of laryngo-tracheitis does not suffice to eliminate the diagnosis of whooping-cough. No doubt other causes besides the action of the specific virus of this disease are capable of producing a similar effect. Irritant pressure by inflamed mediastinal glands upon the adjacent branches of the vagus may do this. Guéneau de Mussy long ago attributed the peculiar spasmodic outbursts of true whooping-cough to similar pressure by inflamed cervical, tracheal, and bronchial glands. Nevertheless, a cough beginning like spasmodic croup and following the course of an ordinary attack of pertussis even in the absence of the characteristic inspiration can only be interpreted in the light of its later manifestations. This initial croup is the more noteworthy because it is in many, probably in most, cases of whooping-cough by no means a marked symptom. Its occurrence in quite young children is possibly connected with the co-existence of teething. Its persistence in spite of the ordinary treatment for croup and its association rather with the coughing effort than with the ordinary processes of respiration and phonation should help to guide practitioners as to its true nature and its most appropriate mode of treatment.

IMPROPER BUSINESS METHODS.

IN the High Court of Justice on Tuesday last, August 1st, judgment was delivered on an interlocutory application in the case of Tallerman *v.* the Dowsing Radiant Heat Company, Limited. The plaintiff, Mr. L. A. Tallerman, is the inventor of a mode of treating various diseases by means of superheated air, to which we have had occasion to refer in our columns. In THE LANCET of August 29th, 1896, we published an article by Dr. Knowsley Sibley which gave an account of the Tallerman mode of treatment in its application to certain cases. A rival mode of treatment, patented by a Mr. Dowsing, an electrical engineer, came into the market a year or two afterwards and for the purpose of making this system favourably known to the public and the medical profession the new company circulated pamphlets inferring that Dr. Sibley's article in THE LANCET had reference to their therapeutical methods. This conduct we have already unfavourably commented upon in our columns.[1] It was a discreditable way of doing business and we understand has been offered by the defendants to be discontinued, though the motion for an injunction was not successful.

DOUBLE CONSCIOUSNESS IN A CASE OF HYSTERIA OCCURRING IN A MALE SUBJECT.

THE phenomena of "double consciousness" are in themselves still of great interest. The few cases hitherto recorded and so elaborately investigated, especially by the French school of writers—viz., Azam, Binet, Charcot, Pierre Janet, and others—have been almost entirely restricted to female subjects. In a recent issue of *Il Manicomio Moderno* (1898, fasciculus 3, pp. 371–398) Dr. Baroncini, physician of the asylum at Imola in Italy, relates the extraordinary case of a young man admitted to the asylum owing to a curious form of mental disturbance with double consciousness. The patient was a professional singer whose normal life was at times interrupted by nervous "crises" in which his personality seemed to undergo an extraordinary transformation. The attack usually began with symptoms of depression of spirits and malaise, which however quickly changed. The patient then became joyous and lively and seemed to see all things *couleur de rose*. These symptoms constituted the first stage of his attack, after which he passed into the second stage of his illness. There was a curious feature of interest in this case, in that the patient's personality did not undergo change suddenly—as is the rule in such cases—but quite gradually. He was noticed to

[1] THE LANCET, May 6th, 1899, p. 1270.

become restless and fickle in disposition, to commit a thousand extravagancies, and to be no longer capable of exercising ordinary volition. Later the mental symptoms would improve but he would continue to exhibit some confusion as to what had occurred during the first period of his attack. Then there came a time when the mental and emotional change attained its climax, and at this stage he would commit petty thefts and practise cheating apparently *secundum artem*. The patient, however, retained no memory or recollection of this state and on waking from it would usually find himself in prison or in an asylum. Amnesia for this second period of his attack was complete. His normal life was now once more resumed until a second attack or crisis launched him again into a condition in which his "other self" rose and assumed dominance in acts and conduct after the manner referred to above. The case is of great interest from the medico-psychological standpoint, for examples of such a condition are not numerous and yet when they do occur they are of great medico-legal importance inasmuch as they afford a well-marked example of the relations subsisting between hysteria and alternations of personality with petty criminal tendencies.

THE SALE OF THE MANCHESTER INFIRMARY SITE.

A SPECIAL meeting of the Manchester Infirmary Board was held on Monday July 1st to consider the question of the sale of the Infirmary site to the Corporation. The following minutes of a sub-committee were confirmed:—

1. That the Manchester Corporation pay in cash the sum of £250,000.
2. That a further sum of £100,000 be paid in the following manner: (*a*) collected by the Manchester Corporation from the public £50,000; (*b*) to be paid by the Manchester Corporation in 20 annual sums of £2500—£50,000. Total, £350,000.
3. That the Manchester Corporation reserve on the present Infirmary site an area facing Piccadilly of 3000 square yards for a receiving house and out-patients' department upon the condition that not more than 7216 square yards altogether be covered with buildings. The site of such area of 3000 square yards thus reserved to be hereafter mutually agreed upon.

THE GOVERNMENT AND LEADLESS GLAZE ON POTTERY.

ALTHOUGH much has been done of late years to protect the health of workers engaged in dangerous trades the frequency of lead-poisoning in potteries continues with little abatement. The causes of the disease are well understood and certain precautions to be observed in potteries are made obligatory by official regulations. Theoretically these precautions should suffice, but in practice it is found that the class of humble folk following this occupation, many of whom are young women, are careless of their own interests and not over-anxious to coöperate in the task of preserving their health. From the frequent references to the subject in THE LANCET our readers are aware that pottery is glazed with compounds containing oxide of lead—almost invariably in the form of powder called "raw lead"—and the dangerous stage of the work is the mixing of these glazes and the application of them to the ware previously to firing in the ovens. In THE LANCET Commission on Some Leadless Glazes[1] we explained that lead glazes could be rendered much less harmless by making them, not with "raw lead," but with "fritted lead," a compound produced by fusing "raw lead" with borax, silica, &c., and subsequently powdering this mass. A much more important improvement, however, is the introduction of leadless glazes which, as we mentioned on the same occasion, give the finished ware an excellent appearance, quite equal to that produced by the ordinary lead glaze. In a further article on the same subject,[2] adverting to the report submitted to the Government by Professor Thorpe and Dr. Oliver, we expressed the opinion that the Government was now in a position to compel the adoption of safe "frits" or leadless glazes, and we therefore welcome the announcement just made that the authorities of the Office of Works require leadless glazes to be used in the manufacture of all earthenware for domestic use supplied under contract for the Public Department, the Houses of Parliament, and such of the Royal palaces as are under their charge. This action of the Government, backed by the stimulating influence of the profits to be obtained from important contracts, will supply the necessary impetus for turning the thoughts of practical potters to the capabilities of leadless glazes.

[1] THE LANCET, Jan. 7th, 1899, p. 49.

HONOUR TO SIR JOSEPH FAYRER.

SIR JOSEPH FAYRER has received a letter from the Military Department of the Government of India saying that upon the recommendation of the Governor-General of India in Council Her Majesty's Government has been pleased to confer upon him, as a reward for distinguished and meritorious service, a good service pension of £100 per annum. This we have already announced in our columns, but the Secretary to the Government of India goes on to say: "I am directed to add that, with a view to make this mark of Her Majesty's approbation of your conduct in the service as public as possible, your nomination has appeared in the *Gazette* of India, and your name will also be inserted in the Army List as one of those officers who have been selected to receive a reward for distinguished or meritorious service. I am further desired to convey to you the satisfaction with which the Government of India view Her Majesty's gracious recognition of your good services to the State." We congratulate Sir Joseph Fayrer on this public and graceful acknowledgment of the value of his life-work.

THE SANATORIUM, LIMITED.

THIS association, the object of which is to provide a sanatorium for middle-class patients suffering from pulmonary tuberculosis, held its statutory meeting on July 26th at the Medical Society's Rooms, 11, Chandos-street, Cavendish-square, W. Mr. Bidwell, F.R.C.S. Eng., who was in the chair, after referring with regret to the resignation of Mr. George Briggs, C.C., congratulated the shareholders on having secured an exceptionally suitable site close to Crooksbury Hill in Surrey, with ample room if necessary for 300 or 400 patients. The ground of 32 acres is on a southern slope, well wooded with pine trees and protected against cold winds. The highest part is over 400 feet above the sea level; the sandy soil (lower greensand) dries rapidly after heavy rain; and a plentiful supply of pure water will be obtained by sinking a well. It had originally been intended to erect a building for 48 patients, but the subscriptions being insufficient it was proposed to quickly erect a smaller building for 12 patients, leaving further extensions to a future time. Dr. F. R. Walters, who will act as resident medical officer, explained that the sanatorium was being started by a company because charitable appeals could not be made for paying patients, while grave objections existed to private ventures, and benevolent millionaires were scarce. The medical management would be entirely under his own control, but he had nothing to do with the financial matters, which were left

[2] THE LANCET, April 1st, 1899, p. 919.

in other competent hands. Mr. James Williams, the architect, showed plans of the proposed buildings. The patients' rooms will all be on the south side, with large French windows opening on to a terrace and surmounted by transoms. The dining saloon and kitchen block will be built out on the north side. Several well-known medical men attended the meeting and others sent letters expressing approval of the objects of the company, which is intended to be a self-supporting and progressive philanthropic undertaking.

THE EDINBURGH UNIVERSITY CLUB.

CONSIDERING the great heat of the weather a large number of members and guests attended the dinner of this club on Saturday, July 29th, at the Trocadéro, under the presidency of Dr. Alexander Morison. In proposing the toast of the evening—"The University of Edinburgh and its Club"—Dr. Morison gave an eloquent sketch of the history of the University and its medical faculty. The proceedings were enlivened with music, singing, and other forms of entertainment by various gentlemen.

CRUELTY TO CHILDREN.

AT the Central Criminal Court on July 27th Frederick Norman and Eleanor Norman, his wife, were sentenced to six weeks' and one month's imprisonment respectively as second-class misdemeanants for having "unlawfully and wilfully neglected" their child, a little girl of five years of age. The child died from pneumonia, no medical attendance having been procured by her parents. The defendants, who were members of the sect called the Peculiar People, were originally prosecuted for manslaughter but acquitted, probably because no medical witness would go so far as to say that the health of the child would necessarily have been restored under medical attention. The conviction upon the lighter count followed the obvious evidence that medicines might have been given to reduce the child's temperature and to relieve pain, so that her parents were considered by the jury to have "neglected her in a manner likely to cause her unnecessary suffering." The mild sentence was due to the recommendation of the jury to mercy because the defendants had always shown proper care for their children. It is quite true that the convicts displayed no brutality or coarse cruelty towards their children, but five have been born to them and three have died without medical aid being called in. Such slaughter of the innocents should have been visited, in our opinion, with deterrent punishment. Persons may torment themselves for conscience' sake but their unlucky offspring should be protected from them.

APPLICATION OF THE TUBERCULIN TEST TO DAIRY CATTLE.

MOST large lunatic asylums have a certain amount of farm work carried on in connexion with them and in this way Mr. Frank Perceval, medical superintendent of the Lancashire County Asylum at Whittingham, has had the opportunity of studying the incidence and effects of tuberculosis in milch cows, his statistics commencing in October, 1894. In a recently published report on the subject he says that on an average 84 per cent. of the cows at the farms of the asylum were affected with tuberculosis, and in August, 1897, it was decided that the tuberculin test should be used. The animals which did not react were separated from those which did, the latter being milked as usual and fattened off as soon as possible, but not kept longer than six months. The tuberculin was obtained from Professor McFadyean, Royal Veterinary College, London, and the dose given was from 65 to 70 minims. The number of cows tested was 270, of which 180 reacted, 85 did not react, and five were doubtful. Tuberculous disease was actually found in 175 of the 180 cases which reacted, or 97·2 per cent. Mr. Perceval is of opinion that the tuberculin test is a valuable aid in checking the spread of tuberculous disease in herds of cows inasmuch as it enables a large proportion of the diseased beasts to be isolated, but of course it does not lessen the necessity for keeping the animals under healthy conditions, the great essential being a plentiful supply of pure air. The question is obviously one of much importance in connexion with the milk-supply.

THE ARMY MEDICAL SCHOOL, NETLEY.

THE seventy-eighth session of the Army Medical School at Netley was brought to a close on July 29th, when the prizes were distributed in the presence of Surgeon-General Jameson, C.B., Director-General of the Army Medical Service, Sir William Mac Cormac, Bart., K.C.V.O., Deputy Surgeon-General Cayley, I.M.S., and others. The report of the session was read by Colonel Lane Notter, R.A.M.C., who said that the work had been satisfactory and that 55 out of 58 surgeons on probation who had presented themselves for the final examination had proved themselves fitted to receive Her Majesty's Commission. The young officers were, after the distribution of prizes, addressed by Sir George White and Surgeon-General Harvey, C.B. We hope to publish a full report of the proceedings in a subsequent issue. The list of surgeons on probation recommended for commission will be found in the current number of THE LANCET, page 363.

A MEDICAL BOTANIST.

ONE Stephen Shepard Maguth, aged 58 years, described as a clergyman of the Church of England and an LL.D. of Cambridge, may be these things, but he is certainly an ass. He has received two months' imprisonment, and as his seclusion will not be a period of particular toil to him inasmuch as he is to be exempt from hard labour we trust that he will employ it in studying the circumstances of his case, when he should at the end of his term, if he has any powers of right judgment left, find himself in accord with our estimate of him. He seems to have left the Church because of his conscientious opinions and to have set up business as "a scientific medical botanist and hygienic and dietetic adviser in all ailments." In the exercise of the important responsibilities suggested by this style he failed to diagnose a case of diphtheria and treated an unfortunate suffering girl with gross carelessness and ignorance, so that she died. Counsel, after the jury had brought Maguth in guilty, said that his client still believed in the efficacy of his remedies. Quite so, and that is why we call Maguth an ass. He does not belong to the category of deliberate rogues selling for large prices nostrums which they know can have no effect upon the pathological conditions which they presume to treat. He is not that sort of obvious cheat. Rather he is a muddle-headed man blinded by a belief in his own attainments. Such a person may not be as villainous as the more usual form of charlatan, but he is every bit as mischievous.

OPENING OF THE NEW WING OF THE ROYAL ISLE OF WIGHT INFIRMARY BY THE QUEEN.

THE new wing of the Royal Isle of Wight Infirmary, which has been erected at a cost of about £3300 by the inhabitants of all classes in the Isle of Wight, as a Jubilee memorial, was opened by the Queen on Thursday, July 27th. The accommodation of the wing comprises 10 cots, five of which—namely, "the Battenberg," "the Gassiott," "the

Davey," "the Worsley," and "the Polson," have already been endowed at a cost of £1000 each. Special provision for children is obviously necessary in any hospital, and this fact is fully appreciated by Her Majesty who, in reply to an address, said: "I am gratified that special provision is now being made to extend to children the benefits which older patients have enjoyed." No more fitting memorial of the long and wonderful reign of our Queen could have been devised by the loyal inhabitants of the Isle of Wight, for Her Majesty has not only taken a great interest in the Royal Infirmary—as, indeed, she does in all institutions for the care of the sick—but her especial love of children is well known. On the generosity of the benevolent everyone is loth to encroach, but is it too much to ask that the good work so admirably begun may soon be consummated by the endowment of the whole of the 10 cots?

DISTRIBUTION OF MILK AT HOSPITALS.

AN excellent service for the distribution of sterilised milk for the feeding of infants has been successfully organised at three of the leading hospitals of Paris. This was first started on a very small scale in 1892 by Dr. Budin in connexion with the lying-in wards of the Charité Hospital and is now also in working order at the Tarnier Clinic and the Paris Maternity Hospital. When a mother leaves the hospital it often happens that her infant is insufficiently or improperly fed. Of course this applies to infants reared from the bottle. The milk is not sterilised, the bottles are dirty, or the mothers cannot afford to get a sufficient quantity, and preventable deaths ensue. Thus, and to mitigate these fatal effects, women who give birth to children at, for instance, the Charité Hospital and who are poor or have but little milk are told to bring their infants every Tuesday to the hospital. The infants are then weighed, examined so far as is necessary, and the amount of milk which they should take is prescribed. Every morning the mother goes to the hospital to fetch this supply. She brings the dirty bottle and receives a clean one in its stead. The bottles are sterilised in a Pasteur stove. A brush which is made to revolve by machinery scrubs the inside of the bottle with soda-and-water. The milk is boiled for 45 minutes and is drawn from a can by a sterilised syphon so as to fill the bottle. Of course there is no tube to the bottle but only a pipette. This service does not occasion much trouble and it has given very important and satisfactory results. But a considerable difficulty has arisen in obtaining the milk. The funds at the disposal of the hospitals are for the treatment of patients in the hospitals and not for the feeding of infants living outside the hospitals, particularly as many of these children are in comparatively good health and the milk is given not to cure but to prevent illness. The Assistance Publique, which is the authority responsible for the relief of the poor, contributes 10 litres of milk per day to the Charité Hospital, but the amount consumed by the infants is equal to about 20 litres per day; and for the moment the difference is paid for by Dr. Maygrier, who is the successor of Dr. Budin as chief of the maternity clinic. The fact that this service is of such utility that medical men pay for it out of their own pockets rather than refuse to give milk which is so much needed should convince the authorities that a special subvention must be granted. Indeed, the Municipal Council of Paris has voted a resolution to this effect, but it is the Assistance Publique which is responsible for outdoor relief. The whole question of pauperising the population is involved in this matter. Yet from the medical point of view the problem is most simple. At the hospital there is a Pasteur stove and motive power to scrub the bottles by machinery. The milk is properly sterilised and the right quantity is placed in a perfectly clean bottle. A poor mother is not a pauper because she has neither the means nor the skill and knowledge to do all this in her miserable, overcrowded, and poverty-stricken home. Let her fetch the milk from the hospital and the infant has a good chance of living; if not there is a very great risk that the child will die. In the face of these very obvious facts the medical men have not hesitated, even at their own cost, to distribute the milk. They leave to the *doctrinaire* sociologists the sorry task of discussing the theory of the thing and content themselves with continuing to save human life.

AT a meeting of the Council of University College, London, held on July 31st, Dr. E. H. Starling, F.R.S., was elected to the Jodrell Professorship of Physiology in succession to Professor E. A. Schäfer.

THE American Electro-Therapeutic Association will hold its ninth annual meeting at Washington, D.C., on Sept. 19th, 20th, and 21st.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

FOUNDER'S DAY.

A BRILLIANT summer's day and the prospect of hearing a speech by Lord Rosebery attracted a much larger attendance than usual of members of the Council, supporters of the institution, and parents of the boys at Epsom College on July 29th, when Founder's Day was celebrated and the annual prize distribution took place. Epsom College, which contains in the upper and lower schools accommodation for some 350 pupils, is conducted as a first-rate public school with a medical foundation. Various privileges are reserved to the medical profession, but in every other respect it is open to all classes alike. For boys who are intended for the medical profession no school in England possesses equal advantages; special training is provided for the London matriculation and preliminary scientific examinations, and owing to the generosity of the London hospitals there are 10 scholarships ranging in value from 90 to 125 guineas offered annually to boys leaving. The foundation consists of 50 boys, chiefly necessitous orphans of medical men, and is mainly supported by voluntary contributions; foundation scholars have the same privileges as other boys and have none but a few voluntary expenses. The Council are most anxious that the College should not be regarded as exclusively intended for the sons of medical men as they are convinced that there are serious evils attaching to a class school, and they offer annually entrance scholarships, varying in value from £20 to £40 a year, open to all comers, in addition to a number of College exhibitions. The list of distinctions gained by old Epsomians since last year is a very long one and includes university honours, honours in the hospitals, and with the army abroad.

The prize distribution took place in the large hall which had been suitably decorated for the occasion, the school and house trophies occupying prominent positions on the front of the platform and on brackets fixed to the wall at the back. The head-master, the Rev. T. N. Hart Smith, presided and he was supported by Lord Rosebery, Sir Joseph Fayrer, Bart., M.D. Edin., K.C.S.I., chairman; the Rev. E. W. Northey, deputy-chairman; Dr. Holman, treasurer; Colonel Gordon Watson, Dr. Needham, Dr. Galton, Mr. John Croft, Dr. Drage, Mr. Stamford Felce, Dr. Baines, Dr. J. Lumsden Propert, Mr. H. E Vardon, Mr. G. Croft, Mr. C. L. Smiles, Mr. F. A. Oldaker, and Mr. Kiallmark, members of the Council, and the staff of the school.

The CHAIRMAN, having cordially welcomed Lord Rosebery and having thanked him for his kindness in consenting to be present to give away some of the chief prizes, observed that from the list of distinctions which had been placed in their hands they would see that it covered a wide and varied field. He did not think, however, that scholarships and distinctions and prizes were by any means a complete test of the work of the school. He believed that it was only

a partial test and that the work of the school and the value of the work done there was far better tested by the tone of the rank-and-file and by the feelings which the boys carried away with them than by any number of distinctions. At the same time they were always proud of those distinctions. During the last 10 years 23 open scholarships had been won by old boys at the universities and when they considered that a large proportion of their boys did not go to either Oxford or Cambridge but to London he thought that this was a record of which they might be justly proud. Having briefly alluded to the other honours obtained and to their varied character he observed that the greatest service which could be rendered to the school was to get rid of the idea that the work they did there was only a preparation for the study of medicine. Dr. Propert founded the school 44 years ago for the purpose of providing, in addition to other objects, a first-rate education for the sons of medical men, and he (the chairman) was perfectly certain that no first-rate education could be given if it was limited to one type or to one class. He was sure that if he were alive Dr. Propert would not admit the idea that that was only a medical school in any sense whatever. He was most anxious, and all the staff were most anxious, to give variety and breadth to the training there. They wished to give the sons of medical men, as they had ever given, the advantages they now possessed and to train boys in sound principles so that they might be given a good general education fitting them for any profession which they might choose to enter and not only that of medicine. By "sound principles" he was afraid he was old-fashioned enough to mean classics and mathematics. He had very small belief in the value of science as it was often taught at the present day to young boys and he was very anxious indeed to see the preliminary education requisite for the study of medicine and for the study of other learned professions raised above the standard which sometimes existed. He did not believe that it was generally realised in some quarters that it was possible for a boy from the fourth form to enter for the study of medicine; they could not say that of any other profession in the world. Having alluded to the athletics of the school and having expressed his belief in their value he concluded by thanking the staff for the loyal and unswerving support which they always gave him.

The head-master subsequently distributed a number of the school prizes, the Propert Prize being given to Mr. Wood by Dr. Lumsden Propert, son of the founder.

The following prizes were distributed by Lord Rosebery:—Martin, Classics: P. Benton. Martin, Mathematics: Wood. Watts, Science: Rahilly and C. Johnson; junior, Winckworth. French: Parkinson. Carr, Divinity: Manders. Sterry, Divinity: Lloyd. Engledue Essay: Cross. History: O'Meara. Geography: H. Clarke. English literature: Sutcliff. Hodgkin prize: Wood and Brande. Good conduct prize: Rahilly.

Lord ROSEBERY, who had had five of the prefects to lunch with him, subsequently addressed the gathering at some length. He said that he had been asked to say a few words but it would be a matter of some difficulty under present conditions. In the first place the weather was very hot, then the courts of law had opened out a peculiar difficulty of late and there was a question of the copyright of what one was likely to say. At this moment the question was raging before the courts as to the first copyright of a speech when it was delivered and reported. We had only got to this point so far, that the one person who had no property in it was the man who delivered it and, therefore, until this question of proprietorship was settled it would be almost criminal for anyone to add to this species of indescribable property which was in the lost luggage office of the law. Then his audience was so extremely mixed. There were four at least out of Shakespeare's seven ages of man. The boy with his shining morning face—he did not know whether his face is supposed to differ in that quality towards the evening—the soldier, he presumed, and the justice, and he had not the least doubt that the lover was present. He thought everybody would agree that it was not very easy to find the least common multiple of such an assembly. What they had come there to see was whether Epsom College presented a good sample of boys who, as Dr. Propert had said, would soon be men and who, as men, would have to take upon them the duties and the capacities of citizenship. The first and primary object of every school was to turn out men. There was one platitude which people were apt to forget—that every boy, if he lived, must inevitably become a man. The fact was absolutely certain that it was on their men that they depended for the future of their country. Some of the nations owed almost everything to their schools. Scotland, Switzerland, and Prussia, he believed, owed to their schools the place which they held in the races of the world. In England he hoped they were not ungrateful if they said that as regards the old schools, despite their adherence to the studies of classics and mathematics, they had not been so successful in turning out men with an exact education fitted to enable them to meet the difficulties and competition of life. But at any rate they were sure of this, that in England their schools had turned out men. They had been the best schools of manhood that the world had ever seen. As an example of manhood and of the kind of man Englishmen delighted to honour he mentioned the name of Major Marchand who, amid incredible hardship and with scarcely any companionship of his own nation, accomplished a three years' journey right across Africa. He referred to the reception which Englishmen gave to Kossuth and to Garibaldi. Why was it, he asked, that Garibaldi was received with such honour? Because he was a man. Because people saw that he had the qualities of a man; not merely courage and integrity, but he was no self-seeker, he had no personal interests to gain, and he laid down the claim which he might have had and the millions he might have received as if they were dross in comparison with his honour as a man. In England they did not honour those men because they could produce none like them, but because in the training which their schools gave they had not merely formed men but had been able to appreciate manhood. From the very moment when boys left the nursery they could exercise some of the qualities of manhood. They could be exercised all through school life—those qualities not merely of industry but of self-denial and that which, perhaps, showed the most manhood in a boy, the power to say "No." Lord Rosebery concluded his speech, which was greatly appreciated, as follows: You, I suppose, will be scattered all over the world, some of you exercising that profession with which the College is so much associated, that which in its essence contains, perhaps, the most supreme elements of manhood of all the professions. I mean the medical profession. That profession needs tenderness and courage in the highest degree—tenderness to alleviate sickness and suffering, to help the sufferers by sympathy, and, indeed, if the physician be not the patient's most welcome sight that physician is a failure. But not merely is it tenderness and courage that the physician needs; his profession requires more stubborn and obdurate courage than any other. He is always fighting one life-long battle in which he knows that he must be beaten. He is always fighting a life-long contest with the Angel of Death and he knows that, struggle as he may, the Angel of Death must win in the end. The profession of the physician is one long struggle in which, like the Englishman, he must never know when he is beaten until victory has gone against him. He must be tender and he must be brave, and, therefore, when you are scattered all over the world, having in view what was taught you here, you may have some cause to thank Epsom College for the training which you have received. Perhaps you may not often revisit the College. Some of you may come to one of those anniversaries for which Epsom is famous and which are regarded as not entirely consecrated to study. What we wish you to remember Epsom for is that you may be able to look back and to feel in future years, if you succeed, that you owe much of that success to Epsom, and that if you fail you did not fail owing to your life here, but that your recollection of the College may give you energy for one more trial which may achieve success.

The day's proceedings closed with service in the chapel.

VACCINATION IN CORNWALL.—At the meeting of the Helston Board of Guardians held on July 22nd it was reported that the vaccination expenses for the last quarter amounted to £107, being £72 in excess of the preceding quarter. The clerk stated that at present the cost of vaccination would average about £180 yearly, while under the old system it never exceeded £50 per annum. The guardians decided to petition the Local Government Board to reduce the minimum fees to be paid to public vaccinators.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE quarterly Comitia of the Fellows was held on July 27th, the President, Dr. W. SELBY CHURCH, being in the chair.

It was announced that the Bradshaw Lecture this year would be delivered by Dr. Arthur Foxwell on Nov. 2nd, the subject being the Causation of Functional Heart Murmurs.

The PRESIDENT announced that the Bisset Hawkins medal had been awarded to Dr. James Burn Russell, M.D., LL.D., medical adviser of the Local Government Board of Scotland, lately medical officer of health of the city of Glasgow. This was the first award of the medal which is to be bestowed triennially "on some duly qualified medical practitioner who is a British subject and who has, during the preceding 10 years, done such work in advancing sanitary science or in promoting public health as in the opinion of the College deserves special recognition"

The following gentlemen were admitted Members of the College:—Augustus Whitehorn Addinsell, M.B. Edin.; Richard Walter Marsden, M.D. Viet., L.R.C.P.; Robert Oswald Moon, M.B Oxon., L.R.C P.; Thomas Frank Ricketts, M.D. Lond., L.R.C.P.; Robert Dawson Rudolph, M.D. Edin.; Edmund Ivens Spriggs, M.D. Lond.; and James Hugh Thursfield, M.A., M.D. Oxon., L.R.C.P.

The PRESIDENT announced that copies of the report of Sir Herbert Maxwell, Bart., and Dr. Pye-Smith, the delegates of the Government to the International Congress on Tuberculosis held at Berlin, had been received.

Licences were granted to the 125 candidates who were successful at the recent examination and the Diploma of Public Health of the two Colleges was granted to 17 candidates who had passed the required examinations.

Communications were read from the Secretary of the Royal College of Surgeons of England reporting the proceedings of its Council.

A communication was received from the President of the General Medical Council on the proposal of the Council to obtain additional penal powers.

A communication was received from the Incorporated Society of Medical Officers of Health praying the College to appoint a committee to consider the subject of the certification and classification of deaths from diarrhœa. On the motion of Dr. SEATON, seconded by Sir WILLIAM BROADBENT, a committee was appointed to consider the matter, consisting of Dr. Payne, Dr. Tatham, Dr. Seaton, and Dr. Corfield.

A memorial was received from medical practitioners in Rhodesia praying the College to approach the Secretary of State for the Colonies with a view to obtain the repeal of a medical ordinance recently enacted to which serious objections have been taken.

A communication from the Registrar of the General Medical Council, communicating for the information of the College a new regulation with respect to the registration of medical students adopted by the Council at their late session, was referred to the Committee of Management.

On the recommendation of the Council the Baly Medal was awarded to Charles Scott Sherrington, M.D. Cantab., F.R.S., Professor of Physiology in University College, Liverpool.

Reports were received from (*a*) the representative of the College on the General Medical Council, (*b*) the Committee of Management, (*c*) the Laboratories Committee, (*d*) the College Finance Committee, and (*e*) the Conjoint Finance Committee.

On the recommendation of the Committee of Management University College, Sheffield, was added to the list of institutions at which the necessary course of laboratory instruction for the diploma in public health may be attended.

Reports were also received from the Library Committee, the curators of the museum, and the examiners for the licence.

A list of books presented to the College during the past quarter was submitted and the thanks of the College were voted to the donors.

The following is a list of the Censors and other officers elected for the ensuing year:—Censors: Dr. Philip Henry Pye-Smith, Dr. Philip John Hensley, Sir R. Dougla Powell, Bart., and Dr. Charles Theodore Williams. Treasurer: Sir Dyce Duckworth. Emeritus Professor: Sir Henry Alfred Pitman. Registrar: Dr. Edward Liveing. Harveian Librarian: Dr. Joseph Frank Payne. Elected members of the Library Committee: Dr. Philip Henry Pye-Smith, Dr. John Wickham Legg, Dr. George Vivian Poore, and Dr. Norman Moore. Curators of the Museum: Dr. William Howship Dickinson, Dr. Henry Charlton Bastian, Dr. William Cayley, and Dr. Norman Moore. Finance Committee: Dr. Thomas Tillyer Whipham, Dr. John Mitchell Bruce, and Dr. Alfred Lewis Galabin. Examiners:—Chemistry and Chemical Physics: Mr. William Ramsay, Mr. Percy Faraday Frankland, Mr. Frederick Daniel Chattaway, Mr. Arthur Pillans Laurie, and Mr. Henry Wilson Hake. Materia Medica and Pharmacy: Dr. Francis Warner, Dr. William Carter, Dr. Nestor Isidore Charles Tirard, Dr. Hector Wm. Gavin Mackenzie, and Dr. James Calvert. Physiology: Dr. William Dobinson Halliburton, Dr. John Wychenford Washbourn, and Dr. Marcus Seymour Pembrey. Anatomy: Mr. George Robertson Turner and Mr. Alfred William Hughes. Medical Anatomy and Principles and Practice of Medicine: Dr. Joseph Frank Payne, Dr. Thomas Lauder Brunton, Dr. Arthur Ernest Sansom, Dr. Thomas Barlow, Dr. Francis de Havilland Hall, Dr. Thomas Clifford Allbutt, Dr. Herbert Isambard Owen, Dr. James Kingston Fowler, Dr. William Hale White, and Dr. Thomas Oliver. Midwifery and Diseases peculiar to Women: Dr. Charles James Cullingworth, Dr. John Phillips, Dr. Amand Jules McConnel Routh, Dr. C. Montagu Handfield-Jones, and Dr. Robert Boxall. Surgical Anatomy and Principles and Practice of Surgery: Mr. John Langton and Mr. John Neville Colley Davies-Colley. Public Health: Part I., Dr. James Lane Notter; Part II., Dr. William Henry Corfield. Murchison Scholarship: Dr. Thomas Henry Green and Dr. Stephen Mackenzie.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE following awards have been recommended by the Committee of Distribution for the year 1899 in addition to those which were published in THE LANCET of July 29th:—

33 SPECIAL HOSPITALS.

	£	s.	d.
City of London Hospital for Diseases of the Chest, Victoria-park	937	10	0
Hospital for Consumption, Brompton ...	1822	18	4
North London Consumption Hospital, Hampstead	364	11	8
Royal Hospital for Diseases of the Chest, City-road ...	416	13	4
Royal National Hospital for Consumption, Ventnor	260	8	4
Alexandra Hospital for Hip Disease, W.C....	171	17	6
Banstead Surgical Home	41	13	4
Barnet Home Hospital	52	1	8
Belgrave Hospital for Children, S.W. ...	135	8	4
Cheyne Hospital for Incurable Children, S.W.	125	0	0
East London Hospital for Children, Shadwell, E.	677	1	8
Evelina Hospital for Sick Children, Southwark, S.E. ...	468	15	0
Home for Incurable Children, Maida-vale, W.	78	2	6
Home for Sick Children, Sydenham, S.E.	135	8	4
Hospital for Sick Children, Great Ormond-street, W.C.	781	5	0
North-eastern Hospital for Children, Hackney-road, N.E.	364	11	8
Paddington-green Hospital for Children, W.	260	8	4
St. Mary's, Plaistow, E.	171	17	6
St. Monica's, Brondesbury, N.W.	104	3	4
Victoria Hospital for Children, King's-road, Chelsea, S.W.	625	0	0
Victoria Home, Margate	31	5	0
"The Vine," Sevenoaks	41	13	4
British Lying-in Hospital, Endell-street, W.C.	36	9	2
Clapham Maternity Hospital	36	9	2
East-end Mothers' Home	88	10	10
General Lying-in Hospital, Lambeth, S.E.	52	1	8
Queen Charlotte's Lying-in Hospital, Marylebone-road, W.	312	10	0
Chelsea Hospital for Women, S.W.	364	11	8
Hospital for Women, Soho-square, W. ...	312	10	0
Grosvenor Hospital for Women and Children, Vincent-square, S.W.	83	6	8
New Hospital for Women, Euston-road, W.C....	260	8	4
Royal Hospital for Children & Women, Lambeth, S.E.... ...	229	3	4
Samaritan Free Hospital, Lower Seymour-street, W. ...	416	12	4

26 OTHER SPECIAL HOSPITALS.

	£	s.	d.
Cancer Hospital, Brompton, S.W. ...	625	0	0
London Fever Hospital, Islington, N....	1041	13	4
Gordon Hospital for Fistula, Vauxhall-bridge-road, S.W. ...	38	10	10
St. Mark's Hospital for Fistula, City-road, E.C.	156	5	0
National Hospital for the Diseases of the Heart and Paralysis, Soho-square, W. ...	83	6	8
Female Lock Hospital, Harrow-road, W. ...	197	18	4
Hospital for Epilepsy, Paralysis, and other Diseases of the Nervous System, Regent's-park, N.W.	67	14	2
National Hospital for the Paralysed and Epileptic, W.C. ...	781	5	0
West End Hospital for Diseases of the Nervous System ...	125	0	0
Central London Ophthalmic Hospital, Gray's Inn-road ...	46	17	6
Royal Eye Hospital, St. George's Circus, S.E.	208	6	8
Royal London Ophthalmic Hospital, Moorfields, E.C. ...	625	0	0
Royal Westminster Ophthalmic Hospital, Charing Cross, W.C.	125	0	0
Western Ophthalmic Hospital, Marylebone-road, W.	41	13	4
City Orthopædic Hospital, Hatton-garden, E.C.	83	6	8
National Orthopædic Hospital, Great Portland-street, W.	104	3	4
Royal Orthopædic Hospital, Oxford-street, W....	78	2	6
Royal Sea-Bathing Hospital, Margate	520	16	8
Hospital for Diseases of the Skin, Stamford-street, S.E.	10	8	4
St. Peter's Hospital for Stone, Covent-garden	41	13	4
Central London Throat and Ear Hospital, Gray's Inn-road, W.C.	41	13	4
London Throat Hospital, Great Portland-street, W. ...	31	5	0
Metropolitan Ear and Nose Hospital	Nil.		
Royal Ear Hospital, Frith-street, W. ...	10	8	4
Dental Hospital of London, Leicester-square, W.C.	130	4	2
National Dental Hospital, 149, Great Portland-street, W.	83	6	8

29 CONVALESCENT HOSPITALS.

	£	s.	d.
Metropolitan Convalescent Institution, Sackville-street, W.	625	0	0
Bexhill Convalescent Home, Sackville-street, W.	343	15	0
All Saints' Convalescent Hospital, Eastbourne	416	13	4
Ascot Priory Convalescent Home ...	57	5	10
Chelsea Hospital for Women Convalescent Home, St. Leonards	41	13	4
Mrs. Gladstone's Convalescent Home, Woodford	62	10	0
Hahnemann Convalescent Home, Bournemouth	31	5	0
Hanwell Convalescent Home	27	1	8
Herbert Convalescent Home, Bournemouth	20	16	0
Herne Bay Baldwin-Brown Convalescent Home	36	9	2
Herne Bay Mothers' Home	43	15	0
Homœopathic Convalescent Home, Eastbourne	20	16	8
King's College Hospital Convalescent Home, Hemel Hempstead	62	10	0
Mrs. Kitto's Convalescent Home, Reigate	83	6	8
Police Seaside Home, Brighton	52	1	8
London and Brighton Female Convalescent Home	10	8	4
Mary Wardell Convalescent Home for Scarlet Fever	104	3	4
Morley House Convalescent Home for Working Men	156	5	0
St. Andrew's Convalescent Hospital, Clewer	156	5	0
St. Andrew's Convalescent Home, Folkestone	281	5	0
St. John's Home for Convalescent and Crippled Children, Brighton	114	11	8
St. Joseph's Convalescent Home, Bournemouth	52	1	8
St. Leonard's-on-Sea Convalescent Home for Poor Children ...	104	3	4
St. Mary's Convalescent Home, Shortlands	16	13	4
St. Michael's Convalescent Home, Westgate-on-Sea	31	5	0
Seaside Convalescent Hospital, Seaford ...	145	16	8
Warley Convalescent Cottage Hospital, Essex	10	8	4
Friendly Societies' Convalescent Home, Dover	20	16	8
Deptford Medical Mission Convalescent Home, Bexhill	20	16	8

14 COTTAGE HOSPITALS.

	£	s.	d.
Beckenham Cottage Hospital	52	1	8
Blackheath and Charlton Cottage Hospital	72	18	4
Bromley, Kent, Cottage Hospital	38	10	0
Chislehurst, Sidcup, and Cray Valley Cottage Hospital ...	41	13	4
Eltham Cottage Hospital	31	5	0
Enfield Cottage Hospital	50	0	0
Epsom and Ewell Cottage Hospital ...	57	5	10
Hounslow Cottage Hospital	18	15	0
Livingstone Cottage Hospital	52	1	8
Mildmay Cottage Hospital	62	10	0
Reigate and Redhill Cottage Hospital ...	67	14	2
Sidcup Cottage Hospital	38	10	10
Tilbury (Passmore Edwards) Cottage Hospital	26	0	10
Wimbledon Cottage Hospital	31	5	0

7 INSTITUTIONS.

	£	s.	d.
Establishment for Gentlewomen, Harley-street	133	6	8
St. Saviour's Hospital and Nursing Home	122	18	4
National Sanatorium for Consumption, Bournemouth	83	6	8
Invalid Asylum, Stoke Newington	62	10	
Firs Home, Bournemouth	15	12	6
St. Catherine's Home, Ventnor	31	5	0
Friedenheim Home for the Dying	260	8	4

55 DISPENSARIES.

	£	s.	d.
Battersea Provident Dispensary	88	10	10
Bloomsbury Provident Dispensary	11	9	1
Brixton, &c., Dispensary	52	1	8
Brompton Provident Dispensary	25	0	0
Camberwell Provident Dispensary	88	10	10
Camden Provident Dispensary	12	10	0
Chelsea, Brompton, and Belgrave Dispensary	45	16	8
Chelsea Provident Dispensary	15	12	6
Child's Hill Provident Dispensary	11	9	2
City Dispensary	114	11	8
City of London and East London Dispensary	26	0	10
Clapham General and Provident Dispensary	27	1	8
Deptford Medical Mission	20	16	8
Eastern Dispensary ...	31	5	0
East Dulwich Provident Dispensary	29	3	4
Farringdon General Dispensary	39	11	8
Finsbury Dispensary	15	12	6
Forest Hill Dispensary	41	13	4
Hackney Provident Dispensary	11	9	10
Hampstead Provident Dispensary	41	13	4
Holloway and North Islington Dispensary	57	5	10
Islington Dispensary	46	17	6
Kensal Town Provident Dispensary ...	10	8	4
Kensington Dispensary	67	14	2
Kilburn, Maida Vale, and St. John's Wood Dispensary	41	13	4
Kilburn Provident Medical Institution	36	9	2
London Dispensary ...	20	16	8
London Medical Mission, Endell-street...	93	15	0
Margaret-street Infirmary for Consumption	Nil.		
Metropolitan Dispensary	57	5	10
Notting Hill Dispensary and Maternity (Provident)	10	8	4
Paddington Provident Dispensary	34	7	6
Pimlico Provident Dispensary (Lupus-street)...	18	15	0
Portland Town Dispensary	17	14	2
Public Dispensary ...	41	13	4
Queen Adelaide's Dispensary	18	15	0
Royal General Dispensary	36	9	2
Royal Pimlico Provident Dispensary ...	67	14	2
Royal South London Dispensary	46	17	6
St. George's and St. James's Dispensary	46	17	6
St. George's, Hanover-square, Provident Dispensary	38	9	2
St. John's Wood and Portland Town Provident Dispensary...	35	8	4
St Marylebone General Dispensary	45	16	8
St. Pancras and Northern Dispensary	37	10	0
South Lambeth, Stockwell, and North Brixton Dispensary	46	17	6
Stamford Hill, Stoke Newington, &c., Dispensary	50	0	0
Tower Hamlets Dispensary	41	13	4
Walworth Provident Dispensary	10	8	4
Wandsworth Common Provident Dispensary	8	6	8
Westbourne Provident Dispensary and Maternity	13	10	10
Western Dispensary ...	54	3	4
Western General Dispensary	135	8	4
Westminster General Dispensary	31	5	0
Whitechapel Provident Dispensary ...	20	16	8
Woolwich Provident Dispensary	11	9	2

ASYLUM REPORTS.

Royal Edinburgh Asylum for the Insane (*Annual Report for 1898*).—The average number of patients resident during the year was 910, of whom 447 were men and 463 were women. The admissions were 451, of whom 201 were men and 251 were women. The discharges amounted to 302 and the number of deaths to 103, of whom 50 were men and 53 were women. Referring to the admissions during the 25 years past it appears that the average number of admissions for each quinquennium has steadily increased by 23 each quinquenniad. The increase has taken place far more among the pauper than among the private class of patients. Of the patients discharged, 302 in number, it is noted that 163 (or 18 per cent. of the average numbers resident) had recovered and 94 were relieved of their worst symptoms. Of the 163 patients who were discharged as recovered 66 per cent. left the institution within six months of their admission, while 24 per cent. more left within the first 12 months. The death-rate was 11½ per cent. on the average numbers resident. The proportion of those who died from pulmonary consumption was found to be larger than it used to be, and especially has this been a

feature during the last five years, the probable cause being given as "overcrowding." The important measures of isolation blocks, of the open-air treatment for phthisical cases, of the periodical testing of cows and of the milk- and meat-supply, and of the sterilisation or Pasteurisation of milk before consumption are not referred to in the report.

Sunderland Borough Asylum (*Annual Report for 1898*).—This asylum has an average population of 309 inmates—viz., 169 males and 140 females. The total admissions for the year were 54 males and 61 females. The number of admissions was considerably above the average since the opening of the asylum four years ago. The question of the existing accommodation in the asylum and its capacity to meet present demands and those of the near future are dealt with in a special report by the medical superintendent and it is pointed out that overcrowding is already imminent. The form which the extension of the institution demands is discussed and it is indicated that an additional building in the from of a hospital or infirmary is most urgently required. Frequently during the past year has accommodation been found insufficient in the hospital wards for recent and acute cases. It is also shown that the institution would then be in a position to meet the "requirements of the town and neighbourhood for the treatment of private patients of the middle classes. For this at present there is no adequate provision in the whole of the north of England." Of the admissions a large percentage (80 per cent.) were in poor physical health and required a very large amount of hospital care and infirmary accommodation. The general paralytics numbered 22, five were epileptics, six had organic brain disease, and eight were subjects of senile insanity—all of very hopeless prognosis. 34 patients were discharged recovered. There were 39 deaths (25 being males and 14 females), 34 per cent. of these being due to general paralysis—a very high proportion.

Cumberland and Westmorland Counties Asylum (*Annual Report for 1898*).—The average number of patients in this asylum for the year 1898 was 636 and consisted of 332 males and 304 females. The number of admissions was slightly higher than in 1897 and has only been twice exceeded since the opening of the asylum. The admissions numbered 180—viz., 79 males and 101 females. Of these there were three cases of congenital imbecility, five cases of epilepsy, three cases of general paralysis, 11 cases of senile mental decay (all over 70 years of age), and two chronic cases transferred from other asylums; while in 19 cases the attack had lasted more than a year before the patient was brought to the asylum. Practically all these cases were incurable. More than one-half of the patients admitted were in a feeble state of health; 16 were on admission found to be in a very weak and exhausted condition and some of these survived a very short time after admission. 47 of the patients admitted had suicidal tendencies—21 of these had actually attempted suicide before admission, the favourite modes of attempt having been hanging and drowning. Hereditary predisposition to insanity was ascertained in 52 of the cases admitted—i.e., in 29 per cent.; it probably existed in many more cases. Intemperance in drink was assigned as the cause in 27 cases, or 15 per cent. of the total. There were 93 patients discharged, 63 as recovered, 28 as relieved, and two as not improved. The recovery rate has been lower than the average of previous years and this was attributable to the great influx of hopeless cases—that is as regards prospects of recovery—in the years 1897 and 1898. There were 58 deaths during the year, 28 men and 30 women. Five deaths (males) were due to facial erysipelas, while 12 were due to tuberculosis, and seven to general paralysis. No special measures have as yet been adopted in the treatment of phthisical patients.

Salop and Montgomery Counties Asylum (*Annual Report for 1898*).—The visiting committee state that for the first time in the history of the asylum a serious outbreak of swine fever occurred on the premises, necessitating the whole stock of pigs belonging to the farm (219 in number) being slaughtered. In January, 1898, the asylum was visited by an outbreak of influenza and about 125 persons were attacked (including 25 of the staff) by the illness. The walls of the older wards still remain in a rough state and the Lunacy Commissioners strongly urge the plastering of the internal walls both on sanitary grounds as well as for improving the appearance of the rooms. "The abolition of urinals, always offensive, is another improvement which should be effected." The mean annual population of this asylum during the year 1898 consisted of 850 patients, 382 being males and 468 females. The admissions were 215 in number, an increase of 13 over the year 1897. The discharges were 72 recovered, 33 relieved, and 32 not improved. Owing to overcrowding 15 female patients were returned to the Middlesex County Asylum. The deaths for the year amounted to 77. The largest number of deaths from any one cause was 14 due to senile decay. The mortality from phthisis was the second in frequency, there being 13 deaths from this cause. A distinct increase of lunatics in the two counties is noted amounting to 33 during the year and "due to a large increase of lunacy in the counties," and it was inevitable "at the present rate of increase among the pauper patients that unless further accommodation is provided" the admission of female private patients would no longer be practicable. Considering the large mortality from phthisis the absence of all reference to isolation blocks, open air treatment, and sterilisation of milk is notable.

Lincolnshire County Asylum, Kesteven (*Annual Report for 1898*).—This is the second of the annual reports of this asylum and shows an average population of 102 patients, 48 males and 54 females, during the year. The admissions during the year were 12 in number and consisted of five males and seven females. There was but one death (male) during the year. The discharges amounted to seven, five patients being discharged as recovered and two as not improved. A temporary annexe to the existing building has just been completed. It was designed to accommodate 32 patients when completed and is built of corrugated iron lined with felt and wood. The Lunacy Commissioners in their visit (May 19th, 1899) note that "the new iron building has been quite recently occupied by male patients. The rooms were in good order; the patients appeared comfortable." Neither seclusion nor restraint has been employed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on July 27th, the President, Sir WILLIAM MACCORMAC, Bart., K.C.V.O., being in the chair.

A report was read from the Committee of Management recommending the adoption of a revised syllabus for the examination for the Diploma in Public Health. The report was adopted subject to the approval of the Royal College of Physicians.

A report was received from the Conjoint Finance Committee. It mentioned that the receipts showed a satisfactory increase with but little increase in the expenditure.

The Secretary laid before the Council a balance-sheet of the receipts and expenditure of the College and it was ordered to be published in the College Calendar.

On the recommendation of the Discipline Committee the names of two Members were directed to be removed from the Register of the College.

A letter was read from Lady Flower thanking the Council on behalf of herself and her family for their kind sympathy in the loss sustained by the death of her husband, Sir William Henry Flower, K.C.B., F.R.S.

In response to a letter from the Rector of St. Clements Danes the Council voted 10 guineas as a contribution towards defraying the debt on the Parish House in Clare Market.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6519 births and 4529 deaths were registered during the week ending July 29th. The annual rate of mortality in these towns, which had increased from 15·7 to 18·4 per 1000 in the four preceding weeks, further rose last week to 20·7. In London the rate was 21·6, while it averaged 20·1 in the 32 provincial towns. The lowest death-rates in these towns were 11·5 in Cardiff, 12·9 in Wolverhampton, and 13·1 in Blackburn and in Huddersfield; the highest rates were 25·2 in West Ham, 25·3 in Salford, 27·6 in Sheffield, and 29·7 in Liverpool. The 4529 deaths in these towns included 1113 which

were referred to the principal zymotic diseases, against 463, 553, and 798 in the three preceding weeks; of these, 807 resulted from diarrhœa, 119 from measles, 76 from diphtheria, 60 from whooping-cough, 26 from "fever" (principally enteric), 23 from scarlet fever, and two from small-pox. The lowest death-rates from these diseases were recorded in Cardiff, Norwich, Oldham, Halifax, and Gateshead, and the highest rates in West Ham, Liverpool, Salford, and Sheffield. The greatest mortality from measles occurred in Manchester, Salford, and Burnley; from whooping-cough in Plymouth, Bolton, and Huddersfield; and from diarrhœa in West Ham, Nottingham, Liverpool, Salford, Preston, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the 33 large towns. The 76 deaths from diphtheria included 35 in London, eight in Sheffield, six in Leeds, five in Liverpool, and four in Leicester. Two fatal cases of small-pox was registered last week in Hull, but not one in any other of the 33 large towns and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, July 29th, was 2658, against 2530, 2602, and 2653 at the end of the three preceding weeks; 307 new cases were admitted during the week, against 315, 299, and 292 in the three preceding weeks. Influenza was certified as the primary cause of 11 deaths in London. The deaths referred to diseases of the respiratory organs in London, which had declined from 194 to 149 in the three preceding weeks, rose again last week to 169, but were seven below the corrected average. The causes of 45, or 1·0 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Salford, Newcastle, and in 15 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Bradford, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16·7 and 16·5 per 1000 in the two preceding weeks, rose again to 17·1 during the week ending July 29th, but was 3·6 per 1000 below the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·4 in Leith and 13·5 in Aberdeen to 19·8 in Glasgow and 20·3 in Perth. The 523 deaths in these towns included 63 which were referred to diarrhœa, 17 to measles, nine to whooping-cough, eight to "fever," six to scarlet fever, and three to diphtheria. In all, 106 deaths resulted from these principal zymotic diseases, against 71 and 81 in the two preceding weeks. These 106 deaths were equal to an annual rate of 3·5 per 1000 which was 1·6 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had increased from 24 to 43 in the three preceding weeks, further rose last week to 63, of which 42 occurred in Glasgow, eight in Dundee, and five in Edinburgh. The deaths referred to measles, which had been eight and 16 in the two preceding weeks, further rose again to 17 last week, and included 15 in Glasgow. The nine deaths from whooping-cough showed an excess over the number in the preceding week, and included seven in Glasgow. Of the eight fatal cases of "fever," four were recorded in Glasgow. The six deaths referred to scarlet fever were two below the number in the preceding week, and included four in Paisley. The fatal cases of diphtheria, which had been two and four in the two preceding weeks, declined again last week to three, of which two occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 53 and 58 in the two preceding weeks, further rose to 64 last week but were considerably below the number in the corresponding period of last year. The causes of 27, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·8 and 21·9 per 1000 in the two preceding weeks, rose again to 28·5 during the week ending July 29th. During the past four weeks the death-rate in the city has averaged 24·9 per 1000, the rate during the same period being 17·7 in London and 15·8 in Edinburgh. The 191 deaths registered in Dublin during the week under notice were 44 in excess of the number in the preceding week and included 39 which were referred to the principal zymotic diseases, against numbers increasing from six to 21 in the five preceding weeks; of these, 19 resulted from diarrhœa, 13 from measles, three from scarlet fever, three from whooping-cough, one from "fever," and not one from either small-pox or diphtheria. These 39 deaths were equal to an annual rate of 5·8 per 1000, the zymotic death-rate during the same period being 5·5 in London and 1·4 in Edinburgh. The deaths referred to diarrhœa, which had increased from three to 10 in the four preceding weeks, further rose last week to 19. The fatal cases of measles, which had been five, seven, and four in the three preceding weeks, rose again to 13 last week. The three deaths from scarlet fever showed an excess over the number recorded in any recent week. The deaths resulting from whooping-cough, which had been four and two in the two preceding weeks, rose again last week to three. The 191 deaths in Dublin last week included 54 of infants under one year of age and 40 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons exceeded those registered during the preceding week. Five inquest cases and four deaths from violence were recorded; and 66, or more than a third, of the deaths occurred in public institutions. The causes of nine, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

THE ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL WILLIAM J. CHARLTON to be Colonel, vice T. O'Farrell, promoted. Lieutenant-Colonel George T. Langridge retires on retired pay. Lieutenant-Colonel H. J. W. Barrow is appointed Officiating Principal Medical Officer, Sirhind District, vice Lieutenant-Colonel W. J. Charlton, transferred to the Home Establishment. Major J. F. Bateson has arrived at Belfast and been posted to the Station Hospital for duty.

VOLUNTEER CORPS.

Artillery: 1st Aberdeenshire: William Alexander Macnaughton to be Surgeon-Lieutenant. 9th Lancashire: Surgeon-Lieutenant A. Cosgrave to be Surgeon-Captain. 2nd West Riding of Yorkshire (Western Division, Royal Garrison Artillery): Surgeon-Lieutenant E. G. Peck to be Surgeon-Captain. *Rifle:* 3rd Volunteer Battalion the South Wales Borderers: Surgeon-Captain J. R. Essex to be Surgeon-Major. Galloway: John Hannay Douglas to be Surgeon-Lieutenant. 1st (Cumberland) Volunteer Battalion the Border Regiment: Surgeon-Lieutenant S. Braithwaite resigns his commission. 1st Cinque Ports: The appointment of Mr. E. J. Deck as Surgeon-Lieutenant, which appeared in the *London Gazette* of Jan. 17th, 1899, is cancelled. 13th Middlesex (Queen's Westminster): Surgeon-Lieutenant B. L. Stivens to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Surgeon-Lieutenant C. H. Gage-Brown to be Surgeon-Captain.

VOLUNTEER INFANTRY BRIGADE.

Norfolk Brigade: Surgeon-Captain C. A. O. Owens, 4th Volunteer Battalion the Norfolk Regiment, to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Brigade.

VOLUNTEER OFFICERS' DECORATION.

The following officers have received the above decoration:—*North-Eastern District: Artillery:* 1st East Riding of Yorkshire Volunteer Artillery (Western Division, Royal Artillery): Surgeon-Lieutenant-Colonel William Draper. *North-Western District: Rifle:* 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Major David Edgar Flinn. *Scottish District: Rifle:* 7th (Clackmannan and Kinross) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Major John Home Hay. *Western District: Rifle:* Surgeon-Lieutenant-Colonel John Meredith, retired.

THE SERVICE EXAMINATIONS.

The following are lists of Surgeons on probation who were successful at the London and Netley Examinations and who have been recommended for commissions as Lieutenants:—

ROYAL ARMY MEDICAL CORPS.*

JULY 29TH, 1899.

	Combined Marks.		Combined Marks.
F. J. J. Palmer	4953	H. F. Hart	3996
G. H. Irvine	4926	A. L. A. Webb... ...	3946
R. A. Cunningham ...	4925	S. G. Butler	3908
V. G. Crawford	4611	L. F. Forbes Winslow ...	3901
G. G. Delap	4595	J. J. W. Prescott ...	3873
O. Challis	4476	P. H. Falkner	3778
W. A. Woodside	4358	H. E. M. Douglas ...	3718
H. Simson...	4348	R. R. Bliery	3647
H. H. Norman...	4320	O. W. A. Risner ...	3631
W. R. Blackwell	4270	J. W. Langstaff ...	3616
H. M. Nicholls...	4105	J. I. W. Morris ...	3568
H. B. Onraet	4026	R. T. Inkson	3496
A. Chopping	4015	A. A. Seeds	3456

INDIAN MEDICAL SERVICE.*

JULY 29TH, 1899.

	Combined Marks.		Combined Marks.
R. D. W. Greig	6289	W. H. Dickinson	4619
C. Dykes	6146	M. W. Manuk	4600
W. E. McKechnie	6019	W. H. Tucker	4552
W. F. Harvey	5998	A. W. Tuke	4544
W. C. H. Forster	5900	C. S. Lowson	4500
J. J. Urwin	5770	J. H. L. Beaman	4324
D. McCay	5766	J. Sloan	4054
A. B. Fry	5171	G. H. Stewart	4003
H. D. Pelle	5117	D. N. Anderson	3995
D. H. F. Cowin	5107	M. N. Chaudhuri	3618
R. C. G. Maddock	5041		

* The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the lists.

NOMINATED SURGEONS ON PROBATION.†

	Netley Marks.		Netley Marks.
H. S. Anderson	2385	R. L. Munn	1938
H. Ensor	2342	T. C. Mackenzie	1472
L. N. Lloyd	2040	R. P. Connolly	1458
L. Wood	2003	J. H. R. Bond	1442

† The positions of these gentlemen are determined by the marks gained at Netley.

TYPHOID FEVER IN THE FRENCH ARMY.

According to a report[1] by Dr. Nollet who was deputed to make an official investigation into an "endemo-epidemic" of typhoid fever at Cherbourg it appears that this fortress bears an unenviable reputation as a prolific centre of the disease. The strength of the garrison is not stated, but in three months from the beginning of November, 1898, to the end of January, 1899, no fewer than 623 cases of typhoid fever occurred among the troops, with 61 deaths, a mortality of nearly 10 per cent., which the reporter looks upon as moderate considering that Brand's method of treatment was not employed. It is greatly to be regretted, he adds, that after the official consecration which Brand's system has received from the whole medical world there should exist no installation in French naval hospitals permitting of its practical application. During the first 10 months of 1898 typhoid fever caused only 134 admissions to hospital in Cherbourg; the sudden increase which then took place was chiefly due, Dr. Nollet thinks, to meteorological vicissitudes. August and September were excessively dry months, whereas in the early days of October exceptionally heavy showers of rain fell, sweeping the sewage from the fields into the already impure river Divette whence the water-supply of the garrison is obtained. In support of this view he points to the date of the outbreak which occurred about a month after the downpour and also to the fact that the various buildings occupied by the troops were simultaneously affected. But if the disease was mainly water-borne it also found a propitious soil in the barracks. All, generally speaking, present grave hygienic faults, including insufficient ventilation and lighting, but the defect which chiefly attracted Dr. Nollet's notice was the worn-out condition of the floors and staircases. Not only was the woodwork disjointed, worm-eaten, and bearing traces of insufficient cleansing during long years, but in the dust collected from the interstices the bacillus of Eberth was also found present. As the soldiers take their meals in their dormitories and keep their bread as well as any other eatables they may be possessed of on unprotected shelves it is easy to understand how typhoid fever could have occurred independently of the water-supply. Dr. Nollet records a good deal of interesting clinical matter, but in consequence of "the penury of the *personnel*" by reason of which the attending medical officers were compelled "to do everything" except take cases, he regrets his inability to make his report as complete in this respect as he could have wished. The recommendations with which the paper concludes should be read *in extenso*. Among other things, Dr. Nollet advises the provision of refectories for the men, the rendering of the flooring impermeable by means of coal tar or in some other more æsthetic way, the interdiction of sewage farms on water-sheds close to large inhabited centres, and the substitution of complete sterilisation for mere boiling (which does not effectually destroy pathogenic germs) when there is reason to doubt the wholesomeness of the water-supply. The most remarkable recommendation, however, is one embodying the suppression of the Chamberland filter. After a period of infatuation (*engouement*), says Dr. Nollet, the Chamberland filter no longer commands the confidence of hygienists. The *bougie* Chamberland may be useful in a laboratory but it is by far too fragile for a barrack room. A filter with a fissure through it or one badly looked after is much worse than none at all. If, however, it should be decided to retain the Chamberland *bougie* in spite of its many defects, then each one in use should be tested daily by the regimental medical officers, who are too anxious for the welfare of the soldiers under their care to object to this additional duty. The following easily applied qualitative test for wholesome drinking-water is suggested by Dr. Nollet: Five cubic centimetres of a 1 per cent. solution of antipyrin in acetic acid diluted to 10 per cent. when mixed with an equal volume of water containing nitrites produces a fine green colouration.

[1] Published in the Archives de Médecine Navale for June, 1899.

THE INCREASING PREVALENCE OF VENEREAL DISEASE AT SOME FOREIGN STATIONS.

It is not only in India that our soldiers and sailors so frequently contract venereal disease but these maladies are largely prevalent in the Straits Settlements, at Gibraltar, in China, and elsewhere. We believe that these diseases are likewise very prevalent in the Colonial Settlements of France and that much inefficiency arises among the French troops in consequence. The subject is extremely difficult to deal with in the present state of feeling in regard to it, but it must sooner or later be dealt with by the adoption of repressive and precautionary measures in a similar way to those employed in the case of other infectious diseases if we are to safeguard our troops and blue-jackets against the terrible consequences that so frequently ensue. It will be seen from our Parliamentary Intelligence column that the matter has been recently receiving attention in the House of Commons.

DEATHS IN THE SERVICES.

Surgeon-General John Alexander William Thompson (retired), on July 24th, aged 77 years. He entered the service in 1844, was promoted to Surgeon in 1856, Surgeon-Major in 1864, Deputy Surgeon-General in 1872, Surgeon-General in 1880, and retired on half-pay in 1881.

NEWPORT (MON.) WATERWORKS SCHEME.—The expenditure on the Wentwood Waterworks up to the present has been £160,000, and it is estimated that the works will not be completed for another two and a half years. The original estimate was £120,000 and the contract was let for £93,000, but the Newport Corporation subsequently undertook the work themselves.

DEVONPORT.—On July 25th the honorary freemanship of the borough of Devonport was presented to Sir W. H. White, K.C.B., LL.D., F.R.S., Alderman J. W. W. Ryder, J.P., and Alderman Joseph May, F.R.C.S. Eng., L.S.A., J.P. The presentations were made by the mayor in the Public Hall and there was a crowded audience who gave the recipients a most enthusiastic reception. The certificate presented to Mr. May contained sketches of the municipal and other public buildings, made allusion to the "eminent services rendered to the borough" by him, and recorded his municipal appointments as follows: Commissioner, 1840–94; councillor, 1861–63; alderman, 1868–99; mayor, 1870–71, 1871–72, 1872–73, 1875–76. The casket was of silver gilt, richly embellished and suitably inscribed.

Correspondence.

"Audi alteram partem."

"TUBERCULAR" AND "TUBERCULOUS."

To the Editors of THE LANCET.

SIRS,—Your leading article in THE LANCET of May 27th, 1899, p. 1442, on the use of these terms ought not to pass unchallenged. Absence from home prevented me from writing sooner.

The view that "tubercular" has merely an anatomical while "tuberculous" has a pathological signification finds no support in the best medical writers of English. In the literary English of medical writers the use of the two words is fairly represented by Ogilvie's "Student's English Dictionary" (1898). "Tubercular" is there defined as "pertaining to, or of the nature of, tubercles; caused by tubercles; affected with tubercles." Under the heading "tuberculous" is "See tuberculate"; and "tuberculate, tuberculated, tubercular, tuberculous" is defined "affected with tubercles; having small knobs or pimples." An examination of medical literature shows that the use of "tuberculous" is restricted by good writers to concrete objects—as, for example, "tuberculous lungs," while "tubercular" qualifies both abstract and concrete nouns. Thus "tubercular" only is used with disease, constitution, meningitis, and so on. Copland, for example, distinguishes the two words in the following sentence: "The mesenteric glands are often found tuberculous ..... and in connexion with tubercular ulceration of the intestinal follicles" ("Consumption and Bronchitis," London, 1861, p. 89). The expression "tuberculous ulceration" occurs, I believe, in Copland only in quotations, direct or indirect. In the report of the recent Royal Commission on Tuberculosis (1898) the same distinction is preserved. "Tuberculous animals" are spoken of, but "tubercular disease."

Bristowe and many of the best writers use only "tubercular." In "Mayne's Medical Dictionary," third edition, 1868, "tubercular" only is given. Finally, the stamp of authority is given by the Royal College of Physicians of London in the "Nomenclature of Diseases," which sanctions only "tubercular," not "tuberculous." Translators seem chiefly to blame for the un-English use of the words. Forbes in his translation of Laennec and Walshe in his translation of Louis use the term "tuberculous" almost exclusively. Translators from the German later on have mostly followed the German instead of the English usage.

Under the influence of translators and of the factitious authority created by THE LANCET and one or two medical journals by the simple process of crossing out "tubercular" and substituting "tuberculous" in the articles of their correspondents a few of the younger authors seem to have strayed into the pathological English of "tuberculous disease." Witness "Gould's Dictionary." I may add that the opinion of some of the leading philologists in England has been taken on the point and that opinion is wholly in favour of restricting "tuberculous" to concrete, while applying "tubercular" to both abstract and concrete nouns. It follows that "tubercular" is always right, while "tuberculous" must often be wrong. "Tuberculous disease, meningitis, osteitis," must therefore be ranked with "tubulous breathing," a "populous fallacy," and a "nebulous hypothesis." That the terms "tubercle," "tubercular," and "tuberculous" should be applied only to the products of Koch's bacillus is of course not contested.

I am, Sirs, yours faithfully,

WILLIAM R. HUGGARD.

Davos Platz, Switzerland, July 21st, 1899.

"'CONSCIENTIOUS OBJECTOR' CERTIFICATES."

To the Editors of THE LANCET.

SIRS,—No difficulty, I think, need deter "F.R.C.S. Eng., J.P., &c.," from acting in cases requiring conscientious objectors' certificates. May I remind him that his duties as a magistrate are dual—ministerial and judicial? In cases where by statute he may have a discretion given, as "it shall be lawful for justices *if they think fit*," here it is evidently intended that they shall consult their own inclination in the matter. But where it is declared that "it shall be lawful" it confers a power coupled with a duty, and in this case I take it that it would be unlawful to do anything else. The conscience clause in the Vaccination Act says that "the parent or other person shall satisfy two justices or a stipendiary magistrate in petty sessions," &c. Every magistrate may therefore interpret the word "satisfy" as he pleases. This word "satisfy" gives the magistrate a judicial discretion and not a ministerial duty. Nothing can compel a magistrate to be satisfied if he is not. In dealing with these cases as a medical magistrate if there are more than two justices present I usually prefer other justices to sign the exemption certificate. If not, I satisfy myself by a few pertinent questions that the applicant has conscientious objections and I sign the certificate if necessary. Our duty as magistrates, be we medical or otherwise, is the same—to carry out the law. With the making of the laws, be they good or bad, we have no concern.

I am, Sirs, yours faithfully,

July 31st, 1899. J. FLETCHER HORNE, M.D. St. And.

"PHYSICIAN AND SURGEON."

To the Editors of THE LANCET.

SIRS,—May I ask your correspondent "Physician and Surgeon," whose letter appeared in THE LANCET of July 29th, if he allows his friends, relations, and patients to address him as "Doctor," which he "most certainly *is not*," or whether he prefers to continually explain to them that he is "a *bonâ fide* real physician and surgeon"? Surely, Sirs, it is ridiculous to occupy your valuable space with such complaints. If "Physician and Surgeon" would consider he would see that for one M.D. not also a physician who calls himself one there must be hundreds of physicians and surgeons not also M.D.'s who allow themselves to be entitled "Drs." and who even prefix it to their names on their visiting cards.—I am, Sirs, yours faithfully,

July 31st, 1899. NOT A REAL PHYSICIAN.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

A Fourth Outbreak of Plague in India Threatened.—Gloomy Prospects.—The Activity of the Anti-vivisectionists.—Promotions for Assistant Surgeons.—Grievances of the Royal Army Medical Corps Officers in India.

INDIA may be said to be threatened with a fourth outbreak of the epidemic of plague. Commencing at Bombay in 1896 it quickly spread to Poona and early in 1897 developed in Karachi. During the monsoon of 1897 a minimum in the mortality was reached, but at the end of the year a recrudescence occurred at Poona. Meanwhile, other places of less importance had been attacked and suffered severely. During the spring of 1898 a second outbreak developed in Bombay and Karachi and other places not previously attacked were visited by the pestilence. The latter part of 1898 witnessed a particularly virulent development in the Southern Mahratta country. The first half of the present year has seen a third visitation in Bombay and Karachi and a second attack in Calcutta, but with a decline of the disease in most other places. I recently recorded a minimum mortality from plague for India since the epidemic began, but during the past fortnight the number of deaths has more than doubled and serious increases are reported from Poona and the Belgaum district. This development is particularly ominous because while Bombay and Karachi may be said to be entitled to an interval of rest after their recent attacks the country to the south of Poona is probably very susceptible at the present time to a relapse. Madras shows a clean bill of health for plague and at Calcutta it has almost died out. The coming winter, however, is looked upon with very serious misgivings in Calcutta.

It is said that a sanitary conference is to be held at Teheran to decide upon the measures to be adopted in meeting the plague. If a repressive policy is enforced it is difficult to see how it can be carried out. The Bushire people believe that they have only to utter a menace and the Central Government will give in. (This

appears to be the view also of the natives of Bombay.) It is feared that the mortality, which is slight now, may rise in the autumn. The priests are already inflaming the people against the plague-prevention measures and demonstrations hostile to the medical men sent from India have been organised.

The anti-vivisectionists have been particularly active of late and their energies seem to have been stimulated by the probabilities of the establishment of a Pasteur Institute. Their great point at present seems to be to incite the minds of certain rich natives against all experimental science and they flatter the natives on their supposed love for, and kindness to, animals. The latest action on their part is a memorial to the Viceroy urging that a hospital where cauterisation and vapour baths can be resorted to for treatment in cases of dog-bites would be much more consonant with the sentiments and feelings of the people. They lose no opportunity of declaiming against the Pasteur Institute in Paris and speak of the "largely discredited and morally repugnant Pasteurian methods." As this opposition has to be met both at home as well as abroad there is a distinct want of some scientific publication embodying the chief results of experimental science and of the work of the Pasteur Institute in particular. It is not everyone who can readily bring up the history of physiological science in answer to some of the false statements of these faddists.

Five civil surgeoncies in the Madras Presidency have been reserved for assistant surgeons by the Government of India under the Secretary of State's instructions. The civil surgeoncies of particular stations must not be confounded with the appointments of medical officers of districts which will continue to be held as permanencies by the commissioned ranks of the Indian Medical Service. There are in the Madras Presidency seven stations to which civil surgeons are appointed—viz., Cocanada, Chatrapore, Chittoor, Cannanore, Guntur, Negapatam, and Tellichery—and five of these will be reserved for uncovenanted medical officers of assistant surgeon's grade. The first appointment has already been made for Negapatam and now the Guntur appointment is to be disposed of. The other civil surgeoncies have for the last few years been more or less constantly filled by assistant surgeons who have held the appointments in acting capacities.

The officers of the Royal Army Medical Corps in India are said to suffer great disabilities in the matter of pay which are only accentuated by the recent concession of military titles. Captains of under five years' service receive Rs. 350 per mensem, whereas veterinary-lieutenants on arrival receive Rs. 400 per mensem and are graded as mounted officers, although officers of the Royal Army Medical Corps are not so graded. Captains of the infantry of the line receive Rs. 450 per mensem. Again, lieutenant-colonels of the Royal Army Medical Corps receive Rs. 450 per mensem less than the colonel of a British battalion and Rs. 750 less than the commandant of a native regiment. The surgeon-general of a presidency receives Rs. 2200 per mensem, while a military officer of his own rank commanding a district gets Rs. 3500 per mensem. If men are worthy of the titles of captain, colonel, &c., they are worthy of the pay and emoluments of the rank. The following conditions are required to place the medical officers on a fair footing: (1) the pay of the rank they hold in the army *plus* the allowances usually granted to that rank; (2) horse allowance in cantonments; (3) charge pay for hospitals and regiments (officers of the Indian Medical Services receive this and, therefore, why not their comrades?); (4) travelling allowance on the line of march; and (5) facilities to attend hospitals in order to keep abreast with recent advances in the profession. Much money is spent annually for instruction of officers in other branches, while not an anna is spent on the medical officers.

July 9th.

PLAGUE IN HONG-KONG.

(FROM A CORRESPONDENT.)

IN the week ending June 30th 139 cases of plague and 143 deaths were reported—an average of 22 cases and 21 deaths daily. This means that the last fortnight has been our worst—over 1000 deaths are now reported. No special effort is being made to get rid of the disease; there are a few search parties and cleaning is still going on. Dr. Atkinson said at a late meeting of the Sanitary Board that there were not enough search parties and lamented that owing to the present strain on the police (due to the extension of the colony) they could not help the sanitary service this year. Mr. Osborne, an unofficial member who has only recently joined the board, observed that the staff of the Sanitary Board was quite insufficient; it would be necessary to pay more for a better class of man, for more of them, and for Chinese interpreters. Prophylactic inoculation is being done a little.

In Dr. Atkinson's annual report for 1898 reference is made to the epidemic of plague in that year. Comparing the years 1896 and 1898 he says: "It will be seen that the disease in each year attained its maximum in the month of May; in this colony in each outbreak the months of maximum mean temperature are followed by a material reduction in the number of cases." He instances the fact that "each epidemic year has been followed by a year of freedom from the disease—e.g., 1894, 1896, and 1898 were epidemic years, whilst in 1897 and thus far in 1899 (March 7th) the colony has been practically free from the disease." Dr. Atkinson says that the conclusions to be drawn from the colony's experience of plague in 1896 and 1898 are that the occurrence of plague is favoured by: (1) long prevalence of drought or of abnormally low rainfall; (2) atmospheric temperature below 82° F., as the months of maximum mean temperature were in each year followed by a material reduction in the number of cases; (3) the absence of sunshine; and (4) the dampness of the atmosphere. During the months in which there were most cases the mean humidity of the atmosphere was high.

July 1st.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Tropical Diseases Expedition to West Africa.

THE expedition to West Africa organised by the Liverpool School of Tropical Diseases sailed from the Mersey on July 29th on board the African mail steamer *Fantee*. Major Ross, I.M.S., the chief of the expedition, was accompanied by Dr. H. E. Annett, the demonstrator of pathology in the School of Tropical Diseases, and Mr. E. E. Austen, representing the British Museum. They will be joined at Sierra Leone by Dr. Van Neck who is to accompany the expedition on behalf of the Belgium Government and the Congo Free State. It is probable that Freetown will be made the centre of the investigations which will occupy about two and a half months. This is the first scientific expedition which has been sent out from England for the study of malaria, the scourge of West Africa, the systematic investigation of which is of the highest importance. In Liverpool alone between 200 and 300 cases of malaria are annually received.

Hospital Sunday and Saturday Funds: Annual Distribution to Liverpool Charities.

The account submitted by the treasurer to the committee of the above-mentioned funds showed that bringing forward £490 from last year the amount available for distribution was £13,070. This is the largest sum recorded. The Hospital Sunday collection fell off by £50 but the Hospital Saturday funds were increased by £550. The gross total was £13,586, reduced by expenses to £13,070. It was proposed to distribute £12,611, or £600 more than last year, and to carry forward £400. The different amounts will be distributed as follows: Royal Infirmary, £2772; Royal Southern Hospital, £1890; Northern Hospital, £1638; Stanley Hospital, £1082; Infirmary for Children, £756; Eye and Ear Infirmary, £504; St. Paul's Eye and Ear Hospital, £283 10*s.*, &c. The Cancer and Skin Hospital receives no grant this year, thus losing a sum of £180.

Liverpool Summer Assizes.

Mr. Justice Wills, in the course of his charge to the Grand Jury on July 26th, said he regretted to state that the calendar was really a terrible one—it was a long and a shocking one. There were no fewer than seven or eight charges of homicide, three of them of murder; and eight or nine cases of wounding with intent to do grievous bodily harm. There were 16 or 17 charges of filthy conduct with women and children and there was a sprinkling of almost every other crime known to the law.

Bequests to Liverpool Hospitals.

The late Mr. Thomas Brandreth of Devon Lawn, Wimbledon Park, and formerly of Liverpool, who died on May 27th, has bequeathed £100 each to the Liverpool Royal Infirmary, the Royal Southern Hospital, and the Stanley Hospital.

The Threatened Resignation of the Committee of the Cancer and Skin Hospital.

The troubles of the committee of the Cancer and Skin Hospital have reached an acute stage. That body have now been deserted by the majority of subscribers who came to their assistance on the occasion of the dismissal of two of the senior medical officers in May last. The committee recently advertised for three senior medical officers to fill these two vacancies as well as that of the senior medical officer who had subsequently resigned. In their extremity they requisitioned the friendly offices of a distinguished professor at University College who suggested the names of three gentlemen eminently qualified for the posts. These three gentlemen were adopted by the committee as their candidates to the exclusion of all others. But the subscribers in special meeting would have none of them. All three were defeated by large majorities and in their places were elected Mr. H. Lyle, who for seven years had worked as assistant medical officer, Dr. M. J. Mahony, and Mr. McCracken. Smarting under this unkind blow at the hands of their whilom friends the committee have now announced their intention of retiring in a body from the management of the hospital. Truly this unfortunate charity is in a sorry plight: the old staff vanished; the committee resigning in disgust; added to which the Hospital Sunday Fund grant of £180 has been withdrawn and has been appropriated to the Stanley Hospital, which is sorely in need of funds. It is surely an ill wind which blows nobody good.

Samaritan Hospital for Women.

The annual report of this hospital stated that nearly 700 patients had been treated since it was opened over two years ago and that in the past six months the attendances were about equal to the whole of 1898, there being now over 1100 attendances at the out-patient department during the year. The balance-sheet showed that the funds of the hospital were most economically managed, although there was at present a deficiency. The increase in the work of the charity has necessitated the appointment of an assistant surgeon, to which post Dr. Alexander Stokes has been elected.

Victoria University: Successes of University College, Liverpool, Students.

11 candidates from University College presented themselves at the recent examinations for the degrees of M.B. and Ch.B. Victoria, of whom 10 were successful. The percentage of successes was considerably higher than that obtained by students from the other affiliated colleges and has afforded much satisfaction to the Liverpool School of Medicine.

August 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Graduation Ceremonial of the University of Edinburgh.

THE summer graduation ceremony of Edinburgh University took place on July 29th in the M'Ewan Hall. This graduation ceremony is as a rule principally medical and on this occasion, with the exception of the case of a few non-medical honorary graduates and a few graduates in Science and Arts, the only degrees conferred were those of M.D., M.B., C.M., and M.B., Ch.B. There were, as usual, a large number of graduates and the proportion of ladies in the number was perceptibly larger than in former years. The degree of Doctor of Medicine was conferred on 72 persons, one of whom was a lady. Six gold medals were awarded, the recipients of this honour being Dr. Robert William Beesley, Dr. Dina Nath Prithu Datta, Dr. Percy Theodore Herring, Dr. Jessie MacLaren MacGregor, Dr. John Malcolm, and Dr. William John Munro. 15 graduates were highly commended for their theses. The address to the graduates was delivered by Professor Sir Henry W. Littlejohn who spoke of the contrast between the opportunities for study for the graduates in the present year and in that in which he himself had graduated, when it was necessary to go abroad for the study of any of the special subjects. At the present time it was not necessary for any graduate to leave Edinburgh for such study, though there were many advantages in a *Wanderjahr* spent in the medical schools of Berlin, Vienna, and Paris. He referred to the stirring address of the Lord Rector on the duty of graduates as citizens of a great empire. In connexion with that idea came the question, "How far shall we of the medical profession intervene as citizens in the frays of political life?" While deprecating the assumption by medical men of active partisanship he thought that every medical man should record his vote both in political and municipal contests. The medical man was bound to give his fellow-citizens the benefit of his university training in one department—namely, with regard to the questions affecting public health.

University Court of St. Andrews.

A meeting of the University Court of St. Andrews was held on July 29th. Among other business the applications of candidates for the chair of Pathology rendered vacant by Dr. Muir's resignation were laid on the table and the Court appointed Dr. L. R. Sutherland, senior assistant to the Professor of Pathology at Glasgow University, to the chair. On the application of Professor Pettigrew and having reference to the Chandos chair of Medicine and Anatomy the Court agreed to relieve him from the duty of lecturing, reserving to him during his lifetime all the rights and privileges of the said chair, as also the annual salary of £425, and they authorised the present lecturer on physiology (Dr. Fraser Harris) to teach the whole subject of physiology. The Court adopted a recommendation of the Business and Finance Committee for the institution of 12 entrant medical bursaries of the value of £20 each tenable for two years subject to the following conditions: (1) candidates may take any four of the higher papers in the arts and science preliminary examinations and the bursaries will be decided by the aggregate of marks assigned; and (2) candidates must reach the standard necessary to entitle them to pass the medical preliminary examination. The Court approved certain draft clauses, submitted by the General Medical Council, amending the Medical Acts and giving additional disciplinary powers, with the proviso that it shall be clearly defined that in the Scottish Universities the "medical authority" having the power of revoking, cancelling, and restoring medical degrees is to be the Senatus Academicus, under appeal to the University Court. The resignation by Dr. A. Masterman of the offices of University Assistant to the Professor of Natural History and Lecturer on Embryology, as he had been appointed to a lectureship in the new School of Medicine, Edinburgh, was received and accepted.

Glasgow University.

The University Court has appointed Mr. John S. Phillimore, M.A., Christ Church, Oxford, to be Professor of Greek in succession to Mr. Gilbert Murray, resigned. Mr. Phillimore is able to boast of a highly distinguished academic career, but his election in view of the admitted excellence of some of the Scottish candidates has caused some dissatisfaction. This has even found expression in the public press, where it is claimed that for Scottish university appointments "a preference should be given to Scotsmen, other things being equal or nearly equal." According to a local contemporary "the Scottish Universities have learned by bitter experience the folly of absorbing brilliant scholars who have not proved their armour in fields like or similar to the Scottish classroom." It is announced that appointments to the chairs of Natural Philosophy and of History will be made in September. Dr. L. R. Sutherland, senior assistant to the Professor of Pathology in the University, has been elected by the University Court of St. Andrews to be Professor of Pathology in University College, Dundee. Dr. Sutherland has for some years been recognised as one of the most capable of our younger men, and during the long illness of the late Professor Coats he successfully discharged all the duties of the chair as well as undertook the entire responsibility for the pathological work of the Western Infirmary. His remarkable teaching powers have made him highly popular in the student world and not a few hoped that Glasgow would retain him by offering to him the promotion of which all admit he has proved himself worthy. The resignation of Mr. James Colquhoun, LL.D., as a member of the University Court, is announced. Mr. Colquhoun has for some years represented the Town Council in the University Court. Dr. John Lindsay Steven, physician to the

Glasgow Royal Infirmary, has been appointed Lecturer on Medicine in Queen Margaret College. As the College is within the University organisation Dr. Steven thus becomes a university lecturer and as a consequence vacates his office as extra-examiner in medicine in the University. For whilst any university lecturer may be appointed an examiner for medical degrees it is necessary in the terms of the ordinance that every candidate shall be examined by at least two examiners, one of whom shall not be either a professor or a lecturer in the University. Thus, whilst Dr. Steven may remain as an examiner it will be necessary to appoint a new extra examiner in the subject of Medicine. It is certainly to be hoped that he will be so retained. For some years it has been pointed out that the women students at Queen Margaret College ought to have their teachers represented on the Board of Examiners and though no one questions the justice of this claim or denies that such an arrangement is demanded by the traditions of the Scottish Universities the University Court has hitherto remained inactive in the matter. The appointment of Dr. Steven to the lectureship in Medicine in Queen Margaret College whilst he already holds a university examinership is surely an opportunity for securing the representation of the teaching staff of the College on the Examining Board without arousing the timidity which seems to be inherent in academic bodies.

The Spread of Infectious Disease.

At a recent meeting of the Sheriff Summary Court in Glasgow two sheriff's officers were charged with having removed from a house a quantity of bedding which had been exposed to infection from measles and had not been disinfected. The defenders in the witness-box maintained that the wife of the occupant of the house had told them that the bedding had been disinfected and on this point the evidence was conflicting. Sheriff Mitchell, in fining each defender in the sum of £2, said that in so far as they had removed the bedding without a medical certificate of disinfection they had broken the law and must therefore pay the penalty.

Proposed Extension of the City Hospital, Aberdeen.

It has been resolved to offer £2000 for the property (adjoining the hospital) of the Aberdeen Swimming Baths Company, and if the price is accepted to utilise the premises for various purposes connected with the hospital.

Aberdeen Water-supply.

On July 24th and 25th the members of the Aberdeen Corporation visited and inspected the river Avon at Inchrory, about 45 miles from the city, whence it is proposed to take a new water-supply for Aberdeen. The reports by engineering and chemical experts on the scheme will be ready in about a fortnight.

An Educational Impostor Punished.

On Saturday, July 29th, at a sheriff and jury court at Aberdeen, James Grant (late teacher, Falkirk) pleaded guilty to misrepresentation, the accused having adopted the name of James Grant, solicitor, Banff, and the academic honours gained by the latter at Aberdeen University and Edinburgh University, and by this means having obtained the examinership of English Literature at Edinburgh University. Sheriff Burnet, who characterised the conduct of the accused as "a very unusual and very purposeless but a very impudent fraud," sentenced the prisoner to six months' incarceration.

Sanitation on Upper Deeside.

The Scotch Local Government Board have called for the remarks of the Deeside District Committee of Aberdeen County Council on the systematic want of removal of refuse in the villages of Aboyne, Torphins, and Braemar. Both Dr. Watt, medical officer of health for Aberdeenshire, and Mr. J. D. Watson, C.E., the sanitary inspector, had previously called the attention of the committee to the non-scavenging of these villages.

August 1 t.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Medical Association.

THE Council of the Irish Medical Association met on July 25th and had under consideration a scheme in connexion with the Poor-law medical service providing for a scale of reduced fees, consultants' fees, and fees of temporary substitutes; also a project for the formation of branches of the Irish Medical Association for counties or groups of counties. After a full discussion it was decided that the matters should be referred to a committee of the Council to examine and report as to the possibility or expediency of adopting any or all of the proposals. As to consultants' fees the Local Government Board have expressed their views very clearly. In a recent letter to the Cavan Board of Guardians on the subject the following appears: "The Board desire to state that they are not prepared to approve of the scale of fees provided—namely, £1 1*s.* in each case—as they consider it inadequate." A letter to the guardians of the Ardee Union is emphatic: "The guardians will observe that payments to be made in future to practitioners called in to assist the dispensary medical officers under Article 21 of the rules must be in accordance with the scale fixed under Article 23." As to fees for temporary substitutes, the Local Government Board have given the dispensary medical officers a right to four weeks' leave in each year, their substitute to be suitably remunerated by the guardians. Some boards of guardians, especially in the north of Ireland, have rendered the order in reference to leave of absence nugatory by fixing the rate of remuneration for the substitute at such a low figure that it is impossible to obtain substitutes who will accept it. Few qualified young men will do the work of a country dispensary for a month at the rate of £3 per week. The practitioner must accordingly either forego his month's vacation or pay the man who takes his place. The Committee of Council of the Irish Medical Association have, it will be seen, enough to do apart from the projected formation of new branches.

Public Health of Dublin.

At the meeting of the Public Health Committee held at the Municipal Buildings on July 25th Sir Charles Cameron called attention to the fact that although the death-rate from all causes was lower than the average the zymotic death-rate was above the mean owing to the extensive prevalence of measles. No fewer than 98 cases were registered during the week which ended July 22nd. The disease has therefore become epidemic and the suggestion is made that all the primary schools of the city should be closed. The usual difficulty has occurred in connexion with the notorious want of sufficient hospital accommodation for infectious diseases. One patient from the north side of the city was necessarily sent as a pay patient to Cork-street Fever Hospital, there being no room for him at the Hardwick Hospital which is full.

Dispensary Medical Officers' Holidays and the Belfast Guardians.

Recently the Local Government Board have decided that a dispensary medical officer has the right to an annual vacation not exceeding four weeks, he to nominate a duly qualified practitioner as locum-tenent. The Belfast Guardians have agreed to allow two weeks, and in reply to a communication from the Local Government Board they adhere to this on the ground that they have this power of settling the length of the vacation, as they interpret the rule of the Local Government Board as meaning that the holiday is not to exceed four weeks, and hence they believe that they have the right to exercise discretionary powers. The real fact is that the guardians dislike to have to pay for the substitute of the dispensary medical officers, and so they wish to curtail the length of the holidays.

Port Stewart Dispensary.

Dr. John A. Kennedy has been appointed medical officer of Portstewart Dispensary District.

Improvements in Belfast.

Mr. Cowan, C.E., Local Government Board inspector, held an inquiry in Belfast on July 28th with reference to the application of the City Council for the sanction of the Local Government Board to a loan of £15,000 for the paving of streets, £10,000 for flagging footways, £10,000 to provide a refuse destructor, £30,000 to erect an abattoir, £8000 to erect a model lodging-house for men, and £75,000 for electric lighting purposes. Alderman Bigger, M.D. R.U.I., in his evidence, said that last year there were 108,263 loads, weighing 135,000 tons, of refuse to be disposed of. 40,000 tons of this were sent to the country as manure, while the remainder was tipped. There was no place for the destruction of diseased animals, &c., except by burying, which was expensive. By the destructor 120 tons would be got rid of daily. Further evidence having been given and the town

clerk having stated that the loan, if granted, would not, he expected, cause an increase in the city rates, the inquiry ended.

August 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A New Ophthalmic Department at the Necker Hospital.

THE Municipal Council has just had under consideration a report from M. Vivien dealing with the proposed creation of a new ophthalmic department of the Paris hospitals. This branch of surgery is as a fact one of the weakest of the departments of the Assistance Publique, while the various claims upon ophthalmology which are constantly growing could not be in any way satisfied were it not for the 30 or so private clinics which aid in supplying them. There are no ophthalmic departments in the Paris hospitals except the wards under the charge of Professor Panas who has 58 beds at the Hôtel Dieu and those under the care of Dr. Delens who has 20 beds at the Lariboisière Hospital. The Quinze-Vingt Hospital, founded by St. Louis for his soldiers who returned blind from his crusades, contains 110 beds, but since the new arrangements made by Gambetta some 20 years ago, to create a post for his friend Fienzal the ophthalmic surgeon, this hospital takes patients from all parts of France under conditions which are the subject of lively criticisms on the part of both metropolitan and provincial ophthalmic surgeons. The various communes send up their patients and practically allow them the money for their fares to Paris, thus seriously affecting the practice of the local medical men, while the Paris practitioners complain that well-to-do patients go to the Quinze-Vingt Hospital for treatment, which they get gratuitously, i.e., at the expense of the State, instead of coming to their private clinics. However this may be, the invasion of the Quinze-Vingt Hospital by the sick of the provinces reduces the number of beds which this hospital can put at the disposal of Paris and her suburbs to 20 and this number, added to those of the Hôtel Dieu and the Lariboisière Hospital, gives a total of about 100 beds. These are obviously insufficient for the population of Paris and the suburbs—a population amounting to 3,300,000. The number of new patients who come to the Lariboisière Hospital for consultation is 3000 a year, at the Hôtel Dieu 5000, and at the Quinze-Vingt Hospital 18,000 a year, making a total of 26,000, to which may be added an equal number treated at the various private clinics. Owing to there not being enough beds to provide for this population of 50,000 or 60,000 patients annually medical men only send such ophthalmic patients to hospital as they consider will be cured quickly, so as not to fill up the beds, and these cases are almost always cases of cataract. Sufferers from other diseases are treated intermittently as out-patients and only too often drift into blindness, thus creating a class which eventually falls upon the rates (Assistance Publique). The ultimate expense is thus much more than would serve to supply beds here if such patients could be treated in time. Besides, the out-patient rooms are nearly all on the right bank of the Seine, the patients have to wait a long time, they lose a day's wages, and therefore do not attend regularly. They thus often become incurable and the number of such patients is a constantly increasing charge upon the finances of the Assistance Publique. M. Vivien proposes that the Municipal Council should sanction the opening of a new ophthalmic department on the left bank where at present there is none, gratuitous that is to say, although nearly all the private clinics are situated there. With a view to economy he would make use of a ward in the Laennec Hospital formerly occupied by chronic and incurable cases. These cases, however, are now sent to the hospital at Brevannes in the eastern suburbs of Paris. The estimated cost of opening this new department is 37,000 francs. However, the Assistance Publique, on the motion of M. André Lefèvre, although accepting the principle that a new department is necessary and although willing that it should be on the left bank, refuses to use the Laennec Hospital. This hospital is very old and it is intended shortly to pull it down. The new department will therefore be opened at the Necker Hospital. It has also been decided that the surgeon in charge shall not be one of the hospital surgeons but a specialist nominated after a special competition.

Fatal Duel between Medical Men.

A duel was recently fought upon a personal question between Dr. Vergely and Dr. Constantin, both of whom were attached to the Pélegrin Maternity Hospital at Bordeaux. At the second engagement Dr. Constantin fell with a serious wound in the abdomen, the hæmorrhage being profuse. He was taken to the hospital but died on his arrival there. Dr. Vergely has been prosecuted for assassination.

August 1st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Dr. Lapponi on the Health of the Pope.

THE best proof that Leo XIII. is in good health and likely to continue so is contained in the fact that his body physician has left Rome on his holiday while his place at the Vatican is taken by his surgical colleague Professor G. Mazzoni. Before starting for his provincial *villeggiatura* Dr. Lapponi had contributed to the Pope's special organ, the *Vox Urbis*, an exceedingly interesting article entitled, "De Recenti Morbo et Restitutâ Valetudine SS D. N. Leonis Papae XIII.," in which he reviews in fluent and idiomatic Latinity the state of the Holy Father's health for the last six months, the nature of the malady that called for surgical intervention early in the spring, the sequelæ of that operation, and the conditions that justify a favourable prognosis for several years to come. The Pope, concludes Dr. Lapponi, has resumed his regular mode of life in every particular, and "novâ decennali vitae serie inchoatâ, sperare fas est ipsum validâ senectute ad annum aetatis suae centesimum perventurum" (entering as he is on a new decennial period of life we are entitled to hope that with his robust old age he will attain his hundredth year). Leo XIII. shares this hope, or rather cherishes this expectation, to the full. Referring the other day to the crisis through which he passed at the close of February and beginning of March he said, pleasantly: "The world expected a Conclave" (that is, an assembly of the Sacred College for the election of a new Pope), "but we only held a Consistory" (a meeting for the creation of new cardinals). He had, indeed, on ascending the Pontifical throne in 1878 a distinct programme to carry out, and five or six years more, he lately said, are required to bring it to completion. One of its features is his personal performance of the very onerous, very continuous, functions of the Holy Year which will open next Christmas Eve. This will impose a tremendous strain on his energies, mental and physical, as the following provisions for its celebration, just communicated to me, will amply show. From first to last—from Christmas, 1899, to Christmas, 1900—no fewer than 5,000,000 of pilgrims in relays, personally conducted by their bishops from all parts of the world, are expected to come to Rome to assist at the various ceremonies and to receive the apostolic benediction. In view of this His Holiness is instituting an "international office," which will have its headquarters in Via Testa Spaccata, the seat of the Circolo Catholico (Catholic Club). Subordinate to this office there will be branch offices, not only in Rome itself but throughout Italy and on the frontier, each subject to the local bishop who will have under him "segretari poliglotti" (secretaries versed in foreign languages) to act as interpreters. Besides the details of these and other preparatory arrangements the Pope is confronted with the difficulty—unknown in previous "Anni Santi," when there was no rival sovereign at the Quirinal—of how to satisfy the various Catholic monarchs anxious to come to Rome as their predecessors did, for the great functions of the Holy Year. This thorny diplomatic question is, I hear, likely to be solved by the Antonellian plea "non-possumus"—indeed, the ex-Empress Eugénie, it is said, has already received an intimation to that effect. All this, and the strain which it will put on the Pope's health, is costing his medical advisers very serious thought—the winter receptions with the inevitable draughts which must permeate even such an admirably ventilated edifice as St. Peter's being a special source of danger. The year now running its course has been notable for the number of deaths in the Sacred College and within its first six months as many cardinals have been gathered to their fathers. Will 1900 prove a healthier year? Who can tell? But the Holy Father's determination to shirk none of its grave duties remains proof against all medical remonstrance and

explains the fact that his "archiatro" (physician-in-chief) is thus early recruiting his strength in the country, to prepare for anxieties and exertions compared with which those of the present year were a bagatelle.

July 30th.

RUSSIA.

(FROM A CORRESPONDENT.)

Eberth's Bacillus in the Meninges in Enteric Fever.

WRITING in the *Russian Archives of Pathology, Clinical Medicine, and Bacteriology* Dr. Klimenko describes in detail a case of enteric fever complicated with purulent meningitis in which the bacillus of Eberth was isolated after death from the layer of mixed blood and pus lining the meninges. The same bacillus was isolated during life from the urine and after death from the juice of the spleen. The meningitis was possibly secondary to a purulent otitis which existed on the right side for the last 13 days of life, but the discharge from the ear was unfortunately not examined bacteriologically either before or after death.

Increase of Diphtheria in Russia.

In the same journal Dr. Gabritchefski discusses the prevalence of diphtheria in Russia and the need of further measures for diminishing its ravages. He points out that in recent years the number of persons attacked by the disease has increased, the figures for the whole of Russia rising from about 100,000 or 120,000 ten years ago to considerably over 200,000 in 1897. The introduction of the serum treatment has, however, had a marked effect on the mortality of the disease and the actual number of deaths from diphtheria has either not increased at all or has slightly diminished. The author is of opinion that isolation, disinfection, and sero-therapy are not alone sufficient to control the disease and he recommends the following measures: (1) persons recovering from the disease or persons in any way exposed to the infection, although apparently well, should be subjected to bacteriological examination of the buccal, nasal, and pharyngeal secretions; (2) if the bacillus is found such persons, despite their appearance of health, should undergo regular disinfection; (3) patients suffering from diphtheria should not be allowed to leave hospital until the bacillus has completely disappeared from their secretions; (4) in schools, asylums, and institutions where many people, particularly children up to 10 years of age, are living together bacteriological examinations of the buccal and nasal secretions should be practised systematically once a year (in the autumn); (5) the general measures of disinfection practised after cases of diphtheria should not be carried out until the bacillus has disappeared both from the convalescents and from the apparently healthy persons who have been exposed to the infection; and (6) some form of special sanitary bacteriological service should be organised in Russia, particularly for dealing with the disease in villages and places not possessing permanent medical institutions.

Health Resorts in the Caucasus and the Crimea.

The summer health resorts and spas of Russia are little known outside the country and even among the Russians themselves it is only within comparatively recent years that the great natural advantages of many of the resorts and the high medicinal value of many of the spas have been at all fully recognised. Just now the season at the Caucasian group of spas—the best known of all such spas in Russia—is at its height. Already the number of visitors to the four principal centres has exceeded 10,000 and as the names of many visitors fail to be officially recorded it is certain that the actual number of persons partaking of the waters is considerably greater than this. The popularity of the spas has greatly increased in recent years; in 1873 only 1289 persons came to the Caucasian springs; even in 1896 there were less than 9000 visitors during the whole season, so that this year is already, even at this early period of the season, a record year. The four principal spas in the Caucasian group are those of Piatigorsk, the waters of which are mainly sulphurous; Jeleznovodsk, with ferruginous waters; Essentuki, with saline-alkaline waters; and Kislovodsk. But there are many other mineral springs in the Caucasus. Borjom, or the "Russian Vichy," is one of the best known. This is at no great distance from Abbas-Tuman, a resort which has of late years come into considerable notice as the place of residence of the late Tsezarévitch, Prince George, whose sad and untimely death at or near this place has just cast all Russia into mourning. Abbas-Tuman relies less upon its springs, of which, however, it possesses seven, than upon its climate to attract visitors. It would appear from all published accounts—and this is fully borne out by private information from many people who have visited it—to be a very pleasant summer health resort. The place is rather over 3500 feet above sea level; it is surrounded by magnificent pine forests and the scenery in the neighbourhood is of unusual beauty. The climate is an invigorating and a very even one. The average temperatures during the summer months are as follow: May, 60·4°; June, 63·8°; July, 67·8°; August, 74·8°; and September, 62·2° (F.). The season lasts from June 1st to Sept. 1st (old style). It is not, perhaps, altogether impossible that the health resorts of the Caucasus and the Crimea may in time come to be as popular among the inhabitants of Western Europe as those of France, Germany, and Austria now are. At present, however, the latter need have little fear of the rivalry of the Russian resorts. They are too little known, too inaccessible, and too undeveloped to attempt to hold their own against such places as Nice, Homburg, or Carlsbad. As far as climatic and other natural resources are concerned, however, the Russian health resorts are richly endowed. The shores of the Crimea are said to be little, if at all, inferior to those of the Riviera. Yalta is the most popular place in this part of Russia, but there are many other parts of the coast and many villages or towns in the mountains inland which appear to only await development to become most valuable places of resort for invalids. Dr. Ivanof has recently called attention[1] to the great natural advantages of the Crimea in this respect. The southern coast of the peninsula he regards as the best possible place for convalescents from almost any disease. Consumptives, he states, have up to the present done better on this coast than in any other part of the country, and particularly in the winter months. All tuberculous complaints do well there. He advocates a fuller trial of the so-called "sun-baths" which appear to be beneficial in many patients. The best known mud-baths in the Crimea are those of Saki, Mainaki, and Tchokraki, but these appear to be less resorted to than the better-known mud-baths near Odessa. It may be mentioned, *en passant*, that owing to the recent drought and heats in southern Russia the lakes near Odessa whence the mud for the mud-baths are derived are said to show signs of drying up altogether and it is feared that the season there will be a failure in consequence.

General News.

Professor Sklifosovski, whom visitors to the International Medical Congress of 1897 will remember as the President of the Congress, recently completed the fortieth year since his graduation in medicine. It is the pleasant custom in Russia to keep such anniversaries and Professor Sklifosovski was the recipient of a large number of congratulations and good wishes from his colleagues and others.

A Dental Congress was opened in St. Petersburg on Saturday, the 10th (22nd) of July. The Congress is under the patronage of His Highness the Prince of Oldenburg and Dr. Limberg is the President of the organising committee.

From the north to the south of Russia the weather during the present summer appears to be equally abnormal and destructive to both animal and vegetable life. While in the south the combined drought and cold followed by drought and extreme heat have ruined the prospects of nearly all the crops, in the north there has been intense and unusual cold. The papers print photographs of Archangel still many inches deep in snow in the month of May. From Obdorsk, on the Obi, comes news that in May the thermometer scarcely rose above —15° R., or a degree or two below the Fahrenheit zero. This most unusual cold is having a disastrous effect on the reindeer; the young, born at the usual time, have been unable to stand the cold and are dying in hundreds. As the reindeer is a necessity of existence to the wandering tribes on the northern *tundras* we are certain to hear later of much suffering and probably of many deaths from starvation among these poor people.

[1] The Vratch, No. 28, 1899.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Medical Profession in Cuba.

NEW regulations for the practice of medicine have been adopted recently in the island of Cuba. Senor Lañuza, Secretary of Justice in the Advisory Cabinet, has laid a carefully-defined plan before General Brooke which will probably be accepted without important changes. According to this a candidate who desires to practise medicine in Cuba must present a foreign diploma issued by some school, college, university, or institute of good standing, together with an authorisation to practise granted by some State or country, in legal form, with the accredited signature of the proper officials. The Rector of the University of Havana will then issue to the applicant an examination permit and will instruct the dean of the faculty to appoint five professors to conduct the examination, which is to be made on three successive days of three hours' attendance each. It is provided that the applicant must understand Spanish and be in other respects thoroughly competent.

Leprosy in Porto Rico.

As might be expected leprosy exists in Porto Rico and, as elsewhere, cases have to be ferreted out, for the natives are not alive to the necessities of isolation. The Board of Health in San Juan, with an army officer at its head, is a most efficient body of men, and it has been unremitting in its efforts to cleanse the town, remove the danger of epidemics, and locate all those infected with any specific contagious disease such as leprosy and small-pox. So far 10 cases of leprosy have been discovered within the limits of San Juan itself and they have been isolated in comfortable quarters. This is the first attempt ever made in the island to separate lepers from the rest of the community. It is the purpose of the present military government to establish a leper colony on an island near the coast. A preliminary examination has already been made and Luis Peña Island or South-west Cay has been recommended by the sanitary inspector as fulfilling the two more important conditions required, isolation and self-support. This island is about 10 miles off the north-east coast of Porto Rico; it is a little more than a mile long, about 300 yards wide, and has a hill 400 feet high in the middle; it is uninhabited and covered with vegetation and has several hundred acres of arable land; it is entirely surrounded by a barrier reef of coral, allowing ingress for rowboats at four small coves; rain water alone can be obtained and it is estimated that an expenditure of $30,000 for wharf, reservoir, and habitable buildings would enable the leper colony to be established. In the meanwhile all possible efforts are being made through the alcaldes and the medical men in the 70 municipalities of the island to locate actual and suspicious cases, and from results obtained thus far the colony will number at least 25, although these will not necessarily include all the lepers in Porto Rico.

Suit for Return of a Husband's Legs.

A remarkable suit was recently tried in the Supreme Court of Michigan, the verdict of which was that a railroad company cannot be mulcted for damages for not returning to the widow for burial the legs of her husband which had been amputated following his being run over by the company's cars. The amputation was performed by the company's surgeon who cremated the limbs. The patient survived the amputation but a few hours and after his burial the widow sued the company for damages for having been deprived of the right to give the remains of her husband a Christian burial. The Supreme Court is authority for the statement that it was unable to find an analogous case and was therefore forced to determine the question as "one of first impression."

Vaccination in Porto Rico.

Throughout the island and in almost all the towns and "barrios" (suburbs, so-called, although usually miles away from the pueblo) there is more or less small-pox, and with Spanish methods of non-vaccination and non-isolation it can readily be seen what a scourge this disease must have been. The first really great humanitarian measure of the American military government was taken when General Henry issued his order establishing the vaccine farm on the Coamo River, near the hot springs of Coamo, under the direct charge of Major Dr. Azel Ames, U.S.A. The farm is the greatest experiment of its kind ever attempted in the history of the world, for the proposition which confronts the authorities is the immediate vaccination of one million people. The virus that was sent by the medical department, both the glycerinated virus in tubes and the charged ivory points, deteriorated, so that no good results were obtained from hundreds of vaccinations. The deteriorated virus made the vaccine farm a necessary experiment and it has succeeded beyond the fondest hopes. In operation only four weeks 200,000 perfectly charged points have already been sent to the five headquarters of vaccination districts in the island for distribution to the seventy municipalities. At this rate only four more months will be required to complete the stupendous undertaking. The cost is only three cents a charged point, being thus small on account of the method pursued. Thus far more than 400 animals have been inoculated, each one receiving on an average twenty abrasions, producing enough virus to charge at times as many as 1300 points.

Food Adulteration.

Dr. H. W. Wyley, chief chemist of the United States Department of Agriculture, states that fully 90 per cent. of the articles of food and drink manufactured and used in this country are fraudulent. In milk, the most common practice is the abstraction of the fatty substance, the cream. A common practice with dealers is the adulteration with water, and in addition to this preservatives are used to no small extent to prevent the liquid from souring. In butter the common way of cheating the public is the substitution of other fats, both animal and vegetable, for the natural fat of the milk. Both cotton-seed oil and high grades of lard are employed in this work. Honey is a more abused article in the line of adulteration than any other. The principal method of adulterating lard is the mixing of vegetable oils with the natural fat of the hog. Fats and oils instead of being injurious to the health are wholesome to a great degree. Another fraud is the selling of cotton-seed oil for olive oils. In recent investigations Dr. Wiley has found molasses and flour moulded into berries, coloured, mixed with the genuine berries and sold as high grade coffee; fully 70 per cent. of the beer sold in the United States is made of some article other than malt; very little pure jelly is manufactured, and the amount of adulteration in the manufacturing of vinegar is great; maple sugar is made often from brown sugar and an extract of hickory bark; the sugar is the same, and the natural ether that gives the maple sugar its flavour and distinctive quality is too infinitesimal to segregate in an analysis. Peanut shells are often palmed off as ground cinnamon. Methods of colouring vegetables are especially mentioned by Dr. Wyley. The matters mainly used to restore the colour of green peas are sometimes salts of zinc and sometimes salts of copper, either of which is poisonous and the use of which should not be permitted. Probably the chemical substance most commonly used as a preservative is salicylic acid. The chief chemist concludes his report by saying that no food which contains preservatives is fit to eat.

July 18th.

THE FOOD AND DRUGS ACT.—On July 28th a woman was fined £20 and costs by the Bristol bench of magistrates for selling margarine as butter. During the past month she had purchased nearly 200 lb. of margarine which she had made into pats and having dressed herself as a farm woman had sold it as fresh country butter.

THE IMPERIAL INSTITUTE AND THE LONDON UNIVERSITY.—A supplementary estimate of £65,000 and a Treasury minute have been issued regarding the use of a portion of the Imperial Institute by the London University. The eastern and central portions of the main block, including the principal entrance, vestibule, and staircase, and the great hall, a portion of the upper floor of the inner block of building running east and west, and the temporary structure now standing in the south-eastern court will comprise the accommodation. The lease under which the buildings are held from the Commissioners for the Exhibition of 1851 is to be transferred to the Commissioners of Works as representing the Crown, in consideration of which transfer the Government will provide funds sufficient to pay off the existing mortgage of £40,000 on the building, and also to discharge a floating debt of £15,000. The cost of the structural alterations will amount to £7,000. These sums will take £62,000 of the vote of £65,000 and the remaining amount—namely, £3000—will be used for a half-year's maintenance and repairs.

THE BRITISH MEDICAL ASSOCIATION.

MEETING AT PORTSMOUTH.

THE sixty-seventh annual meeting of the British Medical Association was opened at Portsmouth on Tuesday, August 1st, under the presidency of Dr. J. Ward Cousins, M.D. Lond., F.R.C.S. Eng., senior surgeon to the Royal Portsmouth Hospital, and an ex-president of the Council of the Association. This is the first occasion on which the Association has met at Portsmouth.

The Association has been fortunate in having an ideal meeting-place in Portsmouth. The accommodation for the general, the sectional, and other meetings is ample, whilst the natural charms of the town, of the Solent, and of the adjacent Isle of Wight afford pleasant diversions from the more serious objects of the gathering. The continuous sunshine, tempered by a delightfully cool breeze, has also contributed in no small way to ensure success to the sixty-seventh meeting of the Association.

The prospect of fine, brilliant weather being the rule during the meeting evidently decided the majority of the members to discard the time-honoured tall silk hat. There were very few exceptions, the straw hat in various shapes being the favourite head-gear. In Southsea the want of a light and shady hat was particularly felt as there is little shelter offered either by trees or roofed structures. The members and guests of the Association have had nothing to complain of in the arrangements made for their reception. The local sub-committees have well grasped the details of organisation requisite to ensure the comfort and convenience of a large gathering, and the smoothness with which the wheels of the necessary machinery have been running testifies to the excellent results attending the labours of the officials. The general secretaries, Dr. C. C. Claremont and Mr. C. P. Ruel, may well be congratulated upon this fact.

The reception rooms in the Lower Albert Hall, Commercial-road, were not so inconveniently crowded as were those at Edinburgh last year, which presumably points to the conclusion that there are fewer members attending the meeting this year. This may be so, seeing that Portsmouth, interesting and beautiful old town though it be, cannot claim to be so important a historic, scientific, and social centre as the northern city.

The sections have not been so fortunately housed this year as they were last in the new buildings of Edinburgh University. But last year the sections were exceptionally fortunate, for it is very doubtful whether there are half-a-dozen towns in the United Kingdom which could provide a building so convenient for the accommodation of 16 separate crowds under one roof as the University New Buildings proved themselves to be. On the present occasion 12 sections only are meeting, four finding space at the Town Hall, six assembling in various buildings in the Commercial-road, and two in the guardians' offices in St. Michael's-road.

An important feature of the annual gatherings of the British Medical Association is the list of entertainments and excursions provided for the enjoyment of members, for these meetings are dual in their character and their holiday side must not be, and never is, forgotten. In such an environment as that in which Portsmouth lies the task of arranging a combination of pleasurable tours and social functions is considerably lightened by the natural facilities of geographical situation; but the entertainments and the excursions sub-committees deserve a vote of thanks for their labours, which have been much appreciated by those for whose pleasure they catered.

The excellent series of guide-books dealing with the places visited by the Association from time to time has now received an addition. The "Guide to Portsmouth and Southsea" presented by the local committee to members attending this year's gathering is thoroughly well done. The committee have been much assisted in its compilation by the generous help of the mayor, Mr. Alderman T. Scott Foster. In a neat and handy form, with a large number of illustrations of interesting and historical landmarks, naval mementoes, and several maps, the guide-book has enabled the visitor to make a ready acquaintance with the many places of interest in Portsmouth and its immediate neighbourhood.

Dr. Ward Cousins, the President of the Association, entertained the members of the Council, the presidents of sections, and others at dinner in the Town Hall on Monday, July 31st. There were present, amongst others, the Bishop of Winchester, the Roman Catholic Bishop of Portsmouth, the Mayor of Portsmouth, the Rev. C. G. Lang (Vicar of St. Mary's, Portsea), Dr. Nicolson, C.B., Mr. Malcolm Morris, Dr. Freeman of San Remo, Dr. Dawson Williams, Dr. Cresswell Baber, Dr. Cholmeley, and Mr. Jordan Lloyd.

An opening service was held at St. Mary's, Portsea, on Tuesday morning at 11 A.M. The church of St. Mary is a handsome building erected mainly through the munificence of the late Right Hon. W. H. Smith. The musical part of the service was beautifully rendered by the choir, assisted by stringed instruments, and a large congregation followed with close attention the admirable discourse of the Bishop of Winchester, who dwelt on the great responsibility attaching to the medical profession in its close relationship with family life, adding that the clergyman and the medical man were the only two who generally had access to the inner secrets of the home. The collection was, as usual, in aid of the Royal Medical Benevolent College.

A special service with High Mass and sermon for the Roman Catholic members of the Association was provided at St. John's Cathedral, Edinburgh-road. The Right Rev. Monsignor Cahill of Ryde preached and the alms were given to the pension fund of the Royal Medical Benevolent College.

The Pathological Museum was placed in the Seamen and Marines' Orphan School and was divided into six sections. The specimens shown included specimens from the Haslar Hospital, from Netley, from London Hospital, Leeds Medical School Museum, and the Royal Portsmouth and Gosport Hospital, as well as private specimens. Needless to add, the collection comprised an excellent series of gunshot and sabre wounds illustrative of naval and military surgery.

The Drill Hall in Grigg-street is in convenient proximity to the reception-room and the large lofty building offered ample space for the exhibits of the sixty-seventh annual museum. It is a square ugly structure with absolutely no architectural relief and very little attempt was made to decorate the interior. Unfortunately for the purpose of an exhibition the roof is chiefly of glass and the weather being brilliant the heat was intense. Strips of canvas were placed under the glass, but the rays of the sun predominated.

Everybody complained of the closeness of the air in the building and this, coupled with the generally defective conditions of ventilation, made the inspection by the visitors a very fatiguing proceeding. Even early on Tuesday morning—the date of opening—we noticed that the thermometer stood at 80° F. and there was no movement of air. On this occasion the organisers might have induced the authorities to greenwash the roof. As it was the exhibitors must have lost the patronage of many of the visitors who otherwise would have taken an interest in the many novelties presented to view. The exhibition was on a smaller scale than it was last year at Edinburgh and the catalogue certainly did not contain the names of as many exhibitors. There was, however, plenty to see, but the *tout ensemble* was neither artistic nor imposing. The rows of stalls were painfully regular and not so pleasingly arranged as at Edinburgh. There were some excellent x-ray apparatus and effects shown, but the more strictly scientific portion of the museum might with advantage on future occasions be expanded. In another column we deal at length with the more important exhibits—comprising drugs, foods and food products, sanitary appliances, surgical instruments, mineral waters, publications, and a number of other things worthy of the practitioner's notice.

A sanitary and ambulance department was the subject of an interesting exhibition in the Swan-street Board School, the space being devoted chiefly to special beds for hospital use.

The members of the Continental Anglo-American Medical Society gave a luncheon at the Royal Pier Hotel on Wednesday, August 2nd. Among the guests were Professor Osler, Sir William Broadbent, Sir Richard Douglas Powell, Sir Frederick Roberts, Professor Clifford Allbutt, Dr. Bryan of Washington, Dr. Louis Bar of Nice, Dr. Mitchell Bruce, and Dr. J. Watson of Southsea. The toasts of "The Queen" and the "President of the United States" were proposed by Professor Osler, and the toast of the "Continental Anglo-American Medical Society" by Sir William Broadbent, who pointed out how useful such a society was as a bond between British practitioners and those on the continent.

The occasion of the meeting of the British Medical Association at Portsmouth was made use of by the Irish Medical Schools' and Graduates' Association who held their summer general meeting on Wednesday, in the Town Hall, the chair being occupied by Mr. Jocelyn Swan.

Dr. George Wilson, medical officer of health of the Mid-Warwick district, delivered the Presidential Address in the Section of State Medicine. He spoke, as he promised that he would, with great frankness. At the outset he stated that ever since the great Pasteur announced the results of his prophylactic inoculations he had been a close and, he hoped, unbiassed student of bacteriological *literature*. The last word would suggest an explanation of the tone of the whole address—he spoke from a theoretical and not a practical knowledge of that subject. We may be doing Dr. Wilson an injustice, but it is the most charitable construction we can place on his extraordinary statements. At any rate, he has not studied the more recent advances in bacteriological science or he would have been forced to alter many of his utterances. More particularly is this the case with his remarks on the bacillus of tuberculosis. He would also have fortified his position had he given more precise and copious references. Whatever may be the views of the medical press on Dr. Wilson's address it will be hailed with joy and acclamation by those with whom he declares he has not allied himself—namely, the anti-vivisectionists.

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110 members, including two ladies, attended the meeting of the Surgical Section on Wednesday.

It has been decided to hold the next meeting of the Association at Ipswich. On Wednesday morning a deputation from the Ipswich and East Anglian Branch waited upon the Council with the invitation, which was accepted with thanks. Dr. W. A. Elliston of Stoke Hall, Ipswich, was nominated President-elect. It is 26 years since the Association visited Ipswich.

THE GENERAL MEETINGS.

THE FIRST GENERAL MEETING.

THE First General Meeting of the Association was held in the large hall of the Town Hall at 2 P.M. on Tuesday, August 1st. At 2.5 P.M. the members of the Council of the Association, headed by the Corporation of Portsmouth, entered the hall.

In the absence of Sir Thomas Grainger Stewart, the retiring President, who was unhappily prevented by illness from being present, Dr. Robert Saundby, President of the Council, took the chair.

The minutes of the last annual meeting were taken as read.

A letter of regret and apology from Sir Thomas Grainger Stewart having been read Dr. Saundby left the chair, which was then taken by Dr. WARD COUSINS, the President for 1899–1900.

After thanking the Association for the honour conferred upon him Dr. COUSINS proposed the following vote of thanks to Sir Thomas Grainger Stewart:—

That the warmest thanks of the Association be given to Sir Thomas Grainger Stewart, M.D., LL.D., F.R.S.E., for so ably presiding over the Association during the past 12 months, with an earnest hope for his speedy recovery to health, and that he be, and he is hereby elected, a Vice-President of the Association for life.

This was carried by acclamation and notice of its having been so carried was despatched to Sir Thomas Grainger Stewart by telegraph.

Dr. COUSINS then called upon the Mayor, Mr. SCOTT FOSTER, to address the meeting.

His worship, in response, said that he welcomed the members of the Association in his own name and in that of the Corporation of Portsmouth. They were sensible of the great honour conferred upon their ancient borough by the visit of the members of such an important profession as that which included medicine and surgery. Although Portsmouth was not an educational centre and had no university, yet in one respect it was the most important town in the kingdom. It was the headquarters of the British navy and as such could not be a mean town. The members of the Association would find plenty to interest them in the dockyard, in the gun wharf, and in the battleships in the harbour, for there were some left, although most of the men-of-war usually stationed there were away at the manœuvres. Also there were the great hospitals at Haslar and Netley. With regard to the town hall the corporation placed it unreservedly at the disposal of the Association and he hoped that they would find every facility for the carrying on of those deliberations which he hoped would redound to the welfare of mankind. His worship concluded with a few words of congratulation to Dr. Cousins.

The Mayor and Corporation then left the hall and the meeting proceeded to the consideration of the report. Its adoption was moved by Dr. SAUNDBY, who referred to the financial prosperity of the Association. Among matters dealt with by the Council during the past year one of the most important had been the action of the London Chamber of Commerce, which had asserted that medical men were in the habit of receiving secret commissions from various tradespeople. The Council thereupon sent the following resolution to the Chamber of Commerce:—

Resolved: That the attention of the Council has been called to grave general accusations impugning the probity of the medical profession

in the matter of receiving secret commissions and the Council calls upon the London Chamber of Commerce to substantiate such accusations in order that the Council may be in a position, should such practices exist, emphatically to condemn them as a grave breach of professional good conduct and inconsistent with membership of the British Medical Association.

The Chamber of Commerce replied that it could not give the detailed evidence for it had undertaken that the proceedings should be private.

The Treasurer (Dr. CHARLES PARSONS) having seconded the motion that the report be adopted,

Mr. GEORGE BROWN took exception to an expression of Dr. Saundby, who had said that the Midwives Bill of the Association had been put before the House of Commons. He contended that sending a copy of the Bill to the Members was not the same thing as laying it before the House.

Dr. SAUNDBY agreed, and said he had only meant that Members of the House of Commons had been made acquainted with the contents of the Bill.

Mr. GEORGE BROWN moved as a rider to the report, and Dr. BRASSEY BRIERLEY seconded, a motion to the effect that representations should be made to the Lord President of the Council that Mr. J. B. Balfour's Bill was not acceptable to the medical profession.

The following motions were then carried:—

That the report of Council, together with the financial statement for the year ending Dec 31st, 1898, be received and adopted.

That the best thanks of the Association be given to Dr. Charles Parsons for his able services as treasurer for the past three years and for the interest he has shown in the welfare of the Association and that he be and he is hereby elected a Vice-President for life.

In returning thanks Dr. PARSONS paid a warm tribute to the general secretary, Mr. Francis Fowke, for his invaluable services.

Mr. BUTLIN then proposed the election of Mr. Andrew Clark as treasurer for the coming three years, which was agreed to.

During the discussion of the report of the Parliamentary Bills Committee Mr. W. L. MUIR of Glasgow referred to the position of the Scottish Poor-law officers, who, as being liable to dismissal by their parish councils without the power of appeal to the Local Government Board, were at a decided disadvantage as compared with their brethren in England and Ireland. He instanced the scandalous treatment of Mr. Lamont and referred with gratitude to the debate which had lately taken place in the House of Commons and the attitude of the Leader of the House. The Parliamentary Bills Committee had rendered most valuable assistance.

On the question of the reform of the Medical Acts Mr. VICTOR HORSLEY moved:—

That any Draft Bill for the amendment of the Medical Acts shall contain *inter alia* provision for further direct representation of the profession on the General Medical Council and for the establishment of a one-portal system of qualifying examination.

Dr. BRASSEY BRIERLEY seconded this and after various members had spoken in a somewhat discursive manner upon subjects more or less connected with the matter under discussion the motion was carried.

The reports of the other committees were then adopted.

Dr. T. M. NAIR of Madras had given notice of the following:—

That the present constitution of the Civil Medical Service of India, whereby all important educational, scientific, and sanitary appointments are exclusively reserved for members of a military medical service—namely, the Indian Medical Service, who are only lent for civil work till required for war purposes—is wrong in principle, prejudicial to the interests of medical education, science, and sanitation, and unsuited to existing conditions and requirements; and that in the interests of medical education and sanitation in India and for the general advancement of medical science the Civil Medical Department should cease to be an appendage of, or a close reserve for, a military service, and all educational, scientific, and sanitary appointments in the department should be thrown open to the best talent available from the open profession of medicine.

As, however, he was unable to be present Dr. SARAT MULLICK moved it for him. In doing so he referred to the fact that it was substantially the same motion as had been moved at Carlisle four years ago by the late Dr. Bahadurji. Dr. Mullick spoke in high praise of the Indian Medical Service.

Mr. J. H. POTTER seconded in a speech which was the subject of subsequent comment.

Surgeon-General HARVEY, C.B., the Director-General of the Indian Medical Service, opposed the motion, maintaining that it was not accurately worded. He complimented Dr. Mullick upon his very temperate and admirable speech, but regretted the tone of his seconder's remarks.

Colonel MACLEOD of Netley also denied the accuracy of Mr. Potter's statements.

The following motions standing in Mr. MACNAMARA'S name were put by Dr. SAUNDBY and carried:—

That the British Medical Association begs to urge on Her Majesty's Government the necessity for appointing a departmental committee to inquire

(1) As to the extent to which venereal disease prevails among the civil population of Great Britain irrespective of its temporary increase or decrease.

(2) To collect information as to the present arrangements for the treatment of venereal disease, the distribution of hospitals and the number of beds available in different places, and to make suggestions as to the more efficient provision for the treatment of the disease.

(3) To collect suggestions and to express opinions as to the means that can be advised for preventing or limiting the spread of venereal disease among the civil population of this country.

That the above resolutions (if carried) should be forwarded to the President of the International Congress on Venereal Disease which meets at Brussels in October, 1899, urging the Congress to support these views in order that a uniform plan of action may be followed to mitigate the spread of this terrible disease among the people of Europe.

It was pointed out that the date of the Brussels meeting was September and not October.

Dr. BRASSEY BRIERLEY had given notice of two motions, one approving of the attitude of Mr. T. P. O'Connor and Mr. W. J. Galloway towards the Midwives Bill recently before Parliament and condemning that of Sir William Priestley, while the other ran as follows:—

That this meeting condemns the action of those members of the British Medical Association who continue to lecture to persons other than duly recognised medical students upon midwifery and the diseases of women and children, and records its displeasure at the free distribution by certain unauthorised examining bodies of certificates and diplomas to these irregular persons, asserting that the holders of such documents are "skilled" in the practice of midwifery.

Both motions were carried after a long and somewhat irrelevant discussion.

Dr. SARAT MULLICK moved the following, which was seconded by Mr. BRINDLEY JAMES:—

That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same right to practise in India as fully qualified practitioners this Association considers it advisable that there should be a system of registration to protect the public from the mischievous machinations of charlatans; it further undertakes to do all in its power to carry this resolution into effect.

This was carried unanimously.

A motion relative to the position of certain practitioners at Coventry in the employment of the Coventry Provident Dispensary calling on the Council to inquire into the matter was proposed by Mr. GEORGE JACKSON and being duly seconded was carried.

The meeting then adjourned until 8.30 P.M., it being agreed that only the President's Address should be taken then.

THE (ADJOURNED) FIRST GENERAL MEETING.

The adjourned meeting met again on Tuesday evening at 8.30 in the Large Hall of the Town Hall to hear Dr. Ward Cousins's Presidential Address. The proceedings commenced with an organ recital by Mr. J. W. Pillows and it was nine o'clock when Dr. WARD COUSINS rose to deliver his address.

THE PRESIDENT'S ADDRESS.

[AFTER a few introductory remarks Dr. WARD COUSINS asked his audience to take a hasty survey of the condition of medical science at the beginning of the century. The most notable point in the early years of the nineteenth century was the triumph of vaccination. Dr. Cousins continued:—]

The recent modification of the vaccination laws is regarded almost universally as a very unsafe and retrograde change and there is reason to fear that sooner or later there may be another outbreak of small-pox. It is difficult to realise, with all the accumulated evidence of a century gathered from all the great European countries and the centres of America, that we as a profession should have to do combat with such dangerous legislation. The steady progress of protective medicine, the remarkable disappearance of the disease from this country, and the freedom of marks and pits from the faces of the present generation ought to suppress the clamour of the selfish and the ignorant and render it impossible that the people should be exposed to the risk of another sacrifice on the foul altar of small-pox. I am, however, confident that the voice of the medical profession will never cease to sound the alarm and that our great Association will never hesitate to put forth all its influence and strength until the

adversaries of sanitary progress have been defeated and the old enemy slain again at our gates.

[Passing on to consider sanitary and preventive science Dr. Cousins showed how great an advance had been made during the last 70 years. The work of Dr. Farr, of Dr. Parkes, and of Florence Nightingale would never be forgotten. After a sympathetic reference to the life-work of the late Mr. Ernest Hart Dr. Cousins proceeded to consider the questions of pathology and bacteriology. With the first would be ever connected the name of Virchow, with the second those of Koch, Lister, and Pasteur. After shortly mentioning the relations between the disorders of mankind and those of the lower animals Dr. Cousins continued:—]

Malaria.

Investigators have recently been endeavouring to unravel the secrets of malaria poisoning. The disease has been traced by Major Ross and Dr. Manson to a parasite which has the power of assuming a latent condition within the human body. It actually lives in the interior of the red corpuscles of the blood. Dr. Manson thinks that it is removed from the blood by some suctorial insect and that this insect is a species of mosquito. The parasite is propagated outside the human body. The insects are capable of infecting their larvæ, and man is in turn infected by drinking the water contaminated by the mosquito or by inhaling the dust of the dry mud of the pools in which mosquitoes have perished. I refer to these facts only to show the great impulse which bacteriology has given to the study of the intimate connexion between the diseases of mankind and the diseases of animals. It is certain that the latter are far more often the agents by which diseases are distributed than we are at present able to detect. The same disorder in different animals produces very different manifestations and the symptoms may be so variable that the recognition of a common specific cause is almost impossible. What may we expect from this young science in the future? We are only touching the fringe of its possible revelations. Much that has been done will have to be done over again and much that has been written will have to be rewritten. How many questions have yet to be solved? Will the further evolution of bacteriology solve the great problem concerning immunity? The striking differences in the susceptibility to disease in individuals are still unfathomed. Some seem to possess a natural insusceptibility to infectious disorders while others are susceptible on the smallest exposure. I do not believe that any individual can inherit or acquire a resisting power for all forms of disease; some races appear to acquire immunity and native populations in some parts of the world exhibit very little susceptibility to yellow fever and malaria. Race immunity is generally explained by natural selection and protection by inheritance. During long periods susceptible persons were weeded out and those who remain are capable of transmitting their insusceptibility. But we learn from experience that resisting power to infectious diseases is very variable and that there is no such thing in the world as absolute immunity. On the other hand, bacteriology offers us the comforting doctrine of phagocytosis. The cells of the blood are ever ready to engulf and destroy living bacteria and to cast them out as unwelcome guests. The leucocytes may be compared to a great army of invisible warriors. They send out their scouts and as soon as an enemy is in sight myriads appear at the very seat of infection and are drawn up to open the attack upon the intruding bacterial forces. All ends well when the battle of the cells terminates in the destruction of the enemy, but unfortunately sometimes the leucocytes are beaten back and the bacteria are victorious; then they can multiply without hindrance, and general infection is the result of the defeat. Pasteur explained acquired immunity by the assumption that the growth of an organism exhausted a specific pabulum which was essential for its development, so that nothing was left in the body to sustain its vitality. If this theory be correct there must be a nutrient material necessary for the growth of each species of contagion. After all, if we cannot explain immunity we can at least be certain that the blood and other fluids of the body exercise a germicidal and protective power against the action of bacteria.

There can be no doubt that pathogenic organisms are a huge factor throughout our world in the causation of disease and that we must never cease to combat the conditions in which specific organisms can grow. Still we must not forget that there is always another factor which we may call feeble resisting power or impaired vitality. Depend upon it, the susceptibility to disease bears a direct relation to the vigour of the body, the health of every individual is the real measure of the power to resist infection, and personal immunity almost can be acquired by the daily practice of temperance, cleanliness, and periodical repose.

[Dr. Cousins next gave a short *résumé* of the discovery of surgical anæsthesia and passed to consider the question of—]

Asepsis.

We have now reached the dawn of another important epoch in the medical history of the century. The terrible ravages of sepsis, which appeared to have got almost beyond control, helped to bring about better ward ventilation and improved sanitary arrangements in many of the old buildings. The evil of overcrowding was checked and increased cubic space was provided for patients. Many reforms soon followed in the administrative and nursing departments as well as an improved technique in operative surgery. Some treated their cases with water-dressing or irrigation; some, having discarded greasy compounds, closed all their wounds with Friar's balsam; and others, after bringing together the cut integuments with strapping, used dry wool and pressure. There can be no doubt that greater cleanliness and new methods of treatment were introduced at this period with success and these advances helped to prepare the surgical world for the coming of the great crisis when the doctrines of Lister shook the foundation and revolutionised the practice of surgery. Lord Lister demonstrated to the world the part that living organisms play in the production of septic diseases and then exhibited the simple means by which their growth and development could be prevented. He proved that wounds could be made to heal by first intention, that the process of suppuration could be controlled, and that precautions easy of application would stop the development of septic disorders. During the last quarter of the century surgeons have carried out the aseptic system in every land and in every clime and it has given a surprising impulse to successful practice and has developed into a world-wide blessing. The methods employed have varied in detail, but in them all we may observe the same great principles which have brought forth such a complete reformation—the remarkable change for the better started in the wound, then extended to the whole body of the patient, then to his bed, then to the surgeon, the nurse, the whole ward, and at length to the whole hospital. The progress of medicine and surgery has now exploded all the old notions concerning hospital construction and proved the absolute necessity for radical and extensive changes. To-day a modern ward is a perfect little hospital in itself. Well-ventilated corridors are the only channels of communication between it and the other parts of the buildings. Every detail is arranged to obtain perfect ward isolation so that the suffering inmates may be protected against the inroads of preventable disease and external contamination. These structural precautions are invaluable aids to successful treatment and the means by which a group of deadly disorders have now been effectually stamped out. The Royal Portsmouth Hospital consists of a remarkable combination of the old and the new in hospital architecture, and these interesting specimens are to be seen standing side by side. I am confident that there is no part of the country which can show more clearly the contrast between the notions in hospital construction which prevailed 50 years ago and the latest scientific developments. I trust that all who are specially interested in this science will not fail to visit the institution during the meeting, for it is our earnest hope that this remarkable contrast will soon be lost for ever in the expansion and development of our new hospital. Some good people have bewailed the fact that Lord Lister did not appear on this mundane scene some years before William Morton. They believe that it would have been better if asepsis had been the precursor of surgical anæsthesia, for then the surgical world would have been prepared for the sudden increase of operative work and the rapid progress of surgery. I am unable to accept this criticism of the evolution of our science. I believe that anæsthesia was the true antecedent of asepsis. Surely, if the order of these great discoveries had been changed the brilliant developments of our science in many departments would have been impossible. On the other hand, there is a humane and benevolent aspect of the question. The suspension of human pain by a dreamless sleep almost banished at once the dread of the surgeon's knife and helped the sufferer to look forward to relief with

hope and confidence. Let us rest assured that these providential gifts lavished at the right time and the right order their enduring blessings upon the world.

Recent Progress and the Future.

I shall now conclude my remarks with a brief reference to recent progress and the work of the future. The medical profession was never so earnest in its efforts to prevent disease as it is to-day, and it is really a fortunate thing for the world that our ranks are not getting thinner. On the other hand, the people of this country, especially the educated classes, are more anxious than ever to obtain professional assistance in the early stage of their disorders, because they are beginning to appreciate the fact that this is the best time for cure. It is my opinion that in the near future there will be far less medicine taken than formerly—not that I think there will be much reduction in the quantity prescribed by the faculty, but rather that people generally are growing wiser, and will trust less to mysterious and puffed-up remedies. I hope the day will come when every vaunted specific protected by a Government stamp will carry a label revealing the exact nature of its composition.

Recent Advances in Medicine.

Bacteriology has already provided the physician with a new set of remedies. In diphtheria antitoxin has proved of marked utility; the treatment of tetanus, both subcutaneous and intra-cerebral, appears to have been successful in some cases. As regards tuberculosis, enteric fever, and cholera, we must wait the test of experience. The remedies have a scientific basis and I believe we may anticipate great progress. The inoculation with the serum of animals immunised by bacteria and bacterial products is one of the most hopeful developments of medicine. One hundred years ago Jenner succeeded with this treatment and almost destroyed one of the most deadly infectious disorders. Pasteur worked in the same direction with chicken cholera and splenic fever. Inoculation as a protection against cattle plague is steadily gaining ground. Recently very successful results have been obtained at Cape Colony and the farmers are anxious to have their cattle treated with the protective serum. Similar treatment has been employed in India as a preventive measure against plague and Professor Haffkine has reported very favourably on his results. If it fails to prevent the disease it renders the attack less virulent. Already the mortality has been proved to be greatly lowered among the inoculated as compared with the uninoculated. The serum treatment of specific disorders has only reached the initial stage, still it is full of promise. It has for its object the development within the body of a capacity for resistance and invisibly fortifies it against the growth of a particular pathogenic organism. It is essentially a treatment for strengthening the defensive cells of the blood and tissues and promoting the natural means of defence. Another step forward is the discovery of the great value of the products obtained from healthy glands in the treatment of certain disorders. The special utility of thyroid gland substance has been well established and the most marked results have been achieved by its administration. The importance of the normal activity of this gland has been proved by clinical evidence as well as by chemical and pathological investigation. At the same time we really know nothing about the nature of its secretion which appears so essential to the nutrition of the tissues. One very remarkable feature is the benefit which sometimes follows the use of the remedy in disorders not suspected to have any connexion with thyroid secretion. Many other glandular substances have been tried as remedial agents, but up to the present the results have been very indistinct. The close of the nineteenth century will be for ever memorable for the great efforts which have been initiated for the prevention and cure of tuberculosis, not only in this country but in all civilised lands, and we sincerely hope that this united attack upon our deadly and widespread enemy will be followed by enduring benefits to the race. It is a matter of great congratulation that H.R.H. the Prince of Wales is the head of a great national association which has been formed for the purpose of arresting as far as possible this dreadful scourge, and that in all the leading centres men of every class are cordially coöperating in this important movement. As a profession we are anxious to teach the people what science has already accomplished and the great value of sanitary precautions in their homes. We seek to inspire them with confidence in the wide application of simple and effective treatment which will arrest the disorder in the early stage and help to reduce the death-rate from tuberculosis in future years. It is a fact that we have no specific remedy for the disease; the mineral and vegetable kingdoms have been ransacked in vain. The tubercle bacillus does not seem to care for all the physic in the world; but we believe that in a germ-free atmosphere and pure surroundings it may be made to die.

Recent Advances in Surgery.

Notwithstanding the great progress of medicine during recent years the results have been less manifest than the brilliant advances of modern surgery. There is no organ or region of the body which has not been investigated by the surgeon. Year by year the science has gained wider application and reached a higher state of perfection by new methods of diagnosis and improvements in surgical technique. Only three and a half years ago the remarkable discovery of Professor Roentgen was communicated to the scientific world and it has already proved of great value in surgical practice. It has revolutionised the old methods of military surgery and rendered easy the location of metallic substances impacted in the body. It has given a fresh impulse to the study of diseases and deformities of the skeleton and is an invaluable guide to the treatment of injuries and diseases of the epiphyses and joints. We can anticipate with confidence that the treatment of this large group of disorders will steadily improve. The time is coming when there will be a considerable reduction in the number of adults suffering from hernial troubles and this important result will be due to the latest improvements in radical operations. There will be a great reduction in the number of persons afflicted with loss of sight—the issue of the modern treatment of infantile ophthalmia and the corneal diseases of children, and also the early correction of errors of refraction.

Hans Meyer.

During the last 25 years great advances have been made in aural surgery and the number of deaf persons in this and other countries has been greatly lowered. The celebrated Danish physician, Dr. Hans Wilhelm Meyer, was the first to put his finger into the little space between the nose and the throat for the purpose of removing "pharyngeal vegetations." It took him some years to convince the profession that these outgrowths were a common cause not only of loss of hearing and obstructed nasal respiration but also of defective articulation and impaired mental and bodily development. It is no exaggeration to assert that the number of young persons who have been saved from life-long deafness by the removal of these obstructing glands amounts already to hundreds of thousands and that hundreds of thousands more will be delivered from this terrible affliction in future times. Dr. Meyer lived just long enough to know that the medical world recognise the great value of his discovery and to-night we desire to honour his memory and to record our admiration of his splendid labours.

Septicæmia.

The experimental investigation of the causation of human septic disease is still far from complete. Up to the present time the virus of septicæmia has not been isolated, although the bodies of infected animals must contain a very powerful poison. The filtrates of streptococcus cultures have exhibited very little toxic action, and there is no very satisfactory evidence of their value in the complex disorders included in the term "blood poisoning." The prevention of inoculation through a wounded surface is now possible, but when the disorder is once fully established we are practically powerless to overcome the widespread disturbance. I have no doubt that some of the surgical victories of the future will be won by bacteriological science. At the present time we have no cure for sepsis when it has entered the body; still we have much reason to hope that a remedy will be found, and that the destruction of sepsis-producing organisms within the blood and tissues may be at length accomplished.

Cancer.

The treatment of cancer and its manifold complications is another great field for inquiry in coming years. For some time a growing impression has prevailed that the disease has been steadily on the increase. Cancer causes about 6 or 7 per cent. of the total deaths of both sexes over 45 years, but these figures are probably rather under than over the real number. No doubt during the next few years the question of increase will be settled. Recently some investigations have

been published suggesting that the disease is due to a parasite, and Mr. Plimmer states that he has discovered parasitic bodies in 1130 out of 1278 cases. Local irritation is certainly a great factor in the development of cancer, and this may possibly be the channel for the entrance of the parasite. Other observers have suggested that the disorder is liable to recur in particular places, and if this statement is corroborated by further investigation, it will certainly form a presumption in favour of cancer being an infective disease. A curative serum for carcinoma has not yet been discovered. Up to the present time surgical treatment yields the best results and the earlier it is adopted the better. We look forward to the development of new methods of diagnosis, so that the surgeon may be able to recognise the seat and character of the disease in the incipient stage. The pathology and treatment of cancer still bristle with difficulties. We are anxiously waiting for more light and we are ready to receive it from whatever quarter it may fall upon us. It is at least some satisfaction to know that many of the best pathologists and surgeons are diligently labouring in all parts of the world to unfold the mysteries which still surround this terrible disease.

Future Progress of Preventive Medicine.

During the last 50 years there has been a steady increase in the value of human life and we can confidently hope that the health of the people of Great Britain will continue to improve. In the coming century a stronger and broader warfare will be carried on against preventable disease, sanitary authorities will grow in wisdom and will more graciously accept their responsibilities, the public health service will be better organised, the medical officers of health will be better paid and wholly devoted to their duties, hospital accommodation for contagious disorders will be considerably increased, and the houses of the working classes will be transformed and reconstructed on modern lines. I believe there is every reason to anticipate that the death-rate of the country may still be greatly reduced and that from 10 per 1000 to 12 per 1000 may be the figures of the coming century. The great hindrance to the progress of preventive medicine which we have to overcome is the overcrowded and insanitary condition of the dwellings of the working classes. This is the field on which the great battle with infectious disorders will have to be fought out. Our warfare will not be directly with microbic life, but rather with the conditions in which specific organisms are grown. We want to see more progress made in getting rid of the crowded and dirty courts in every city. We want to behold fewer of these revolting pictures of impurity and wretchedness herding together in the narrow avenues where the light of heaven strives in vain to pierce the patched and broken windows and where the meridian beams struggle in vain to penetrate through the gloom and corruption of these den-like homes. These den-like homes are the arch-enemies of sanitary progress in all our great centres. Philanthropy has long pleaded for the removal of these great social evils; the voice of the medical profession has long sounded the alarm, but we are still waiting for the educated and wealthy classes of the community to catch the same inspiration and to join in demanding more sweeping measures by which these nurseries of disease may be exterminated. But the battle against disease and death will only end in disappointment unless we have something more than the force of legislation and the unceasing watchfulness of a complete sanitary system. The great mass of the people must become willing and active helpers; the fathers and mothers of our land must learn how to maintain the healthfulness of their homes and the blinding forces of selfishness and ignorance must be replaced by the best and purest aspirations. If we had the power of transforming the dwelling-houses throughout the land and of establishing everywhere a perfect system of drainage and of securing for all an abundant supply of pure water, we should accomplish but little without the help of the people themselves. Depend upon it the basis of national health is the personal cultivation of health. We want the fathers of England to be the enlightened sanitary officers of their own households. We desire to see a wider knowledge of the laws of health and I hope the day is not far distant when they will be zealously taught in every school in the kingdom. How little the working classes and operatives in our large cities appreciate the fact that the prevention of human suffering and the preservation of health are in a great measure within their reach! They have to learn that they lose both in physical development and vigour by too much toil and too little rest. They have to learn that rest is essential to overcome the strain of daily labour and that personal cleanliness and temperance and domestic sanitation lead the way to higher blessings. The weekly rest when rightly used gives another impulse to sanitary progress. It promotes purification of the body and cleansing of the dwelling. What washings and scourings, what polishings and decorations, herald its near approach! What an army of buckets and brushes and dust disturbers are called out at its coming; what floods of clean water are made to remove the accumulations of the week! Yes; the weekly rest falls like a reviving dew on the hot brow of industry; it stops the wheels of labour; it soothes the brain, gives rest to the hands, and calls forth the highest aspirations of human nature.

THE SECOND GENERAL MEETING.

The second general meeting was held in the town-hall on Wednesday afternoon, the PRESIDENT being in the chair. There was a large attendance of members and their friends.

At the beginning of the proceedings the PRESIDENT announced that the Council had appointed Dr. J. R. Thomson of Bournemouth to succeed Dr. Saundby as President of the Council.

Dr. THOMSON then announced that the Council had that morning received a deputation from the Ipswich and East Anglian Branch inviting the Association to hold their next meeting at Ipswich. The Council recommended that this invitation be accepted, and that Dr. W. A. Elliston of Ipswich be the president-elect. He (Dr. Thomson) proposed that both clauses should be accepted, and this was carried. Dr. Elliston then returned thanks.

On the motion of Mr. Andrew Clark a vote of thanks was passed to Dr. Saundby, and he was elected a vice-president for life.

The PRESIDENT then called upon Sir Richard Douglas Powell to deliver his address in Medicine, which will be found at p. 321.

At the conclusion of the address a vote of thanks to Sir R. D. Powell was moved by Mr. ANDREW CLARK and seconded by Professor OSLER.

The hall then rapidly emptied, and only 35 members exclusive of the Council were left.

The President was proceeding to the transaction of the business left over from the First General Meeting when Dr. F. LORIMER HART asked why the Council had put a veto upon a motion of his and why it had not been published in the *British Medical Journal*.

A variety of explanations were given and a very long and somewhat stormy discussion ensued.

Finally Mr. VICTOR HORSLEY brought forward and Mr. R. F. TOMLIN seconded a motion expressing disapproval of the action of the Council in deciding what should or what should not be discussed at the annual meeting. This was carried.

Dr. LORIMER HART then moved and Mr. VICTOR HORSLEY seconded the following resolution:—

That the Council be requested to appoint a committee for the purpose of formulating and at an early date reporting upon a scheme of collective defence of the interests and consistent maintenance of the honour of the medical profession, in accordance with the provision of paragraph 3 of the Memorandum of Association.

Dr. Hart laid stress on the following points: 1. The policy of the Council has been to discredit and resist medical defence. 2. At first it was argued that the Memorandum of Association was so drawn as not to permit the use of the funds in that chief object of the Association—the maintenance of the honour and interests of the medical profession. 3. By all but two dissentients in a meeting of 1000 in 1895 the Council was directed to obtain an amendment of this defect and this was done by a special resolution in 1896. 4. But notwithstanding other resolutions of general meetings the Council has never applied for the sanction of the High Courts to bring this amendment into operation. 5. Schemes of individual defence put forward had been complicated and deterrent, including an increased subscription, and at Edinburgh last year the general meeting had agreed under these influences to defer action. 6. But if the special resolution of 1896 were legalised no complicated scheme but an enunciation of a few general principles would alone be necessary to enable the funds of the Association to be used in effectively maintaining the honour and interest of the medical profession.

The resolution was carried.

Mr. GEORGE BROWN had given notice to move the following resolution—

That this meeting requests the Council to take such action as they may find expedient to facilitate the formation of a Conciliation Board in reference to medical attendance on members of clubs and friendly societies—

but was informed that the Council had that morning decided to arrange for a Conciliation Board.

Mr. R. F. TOMLIN moved:

That this meeting requests the Council to take measures to support in every lawful manner the rightful claims of the constituents of the several medical corporations to choose, as they are by law entitled, the corporate members of the General Medical Council; and also to assist and support the members of the Royal College of Surgeons of England in securing (as constituting the body corporate of the College) a rightful and satisfactory voice in the conduct of its affairs.

While Mr. Tomlin was speaking to this motion 5 o'clock struck and the PRESIDENT declared the meeting closed.

THE SECTIONS.

The sectional work commenced on Wednesday, August 2nd, in all the sections.

MEDICINE.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

Dr. J. MITCHELL BRUCE, physician to Charing-cross Hospital and the Hospital for Consumption and Diseases of the Chest, Brompton, introduced to the notice of the Section of Medicine two subjects for discussion—viz., the Medical Tests required for admission to the Public Services and the Preventive and Remedial Treatment of Tuberculosis. "Our place of meeting this year," he said, "possesses two eminent features. First, Portsmouth is, and has long been, one of the greatest of our naval and military centres, with a magnificent dockyard and powerful defences both on land and by sea and thus in all its relations past and present, material and sentimental, intimately associated with the fleet and the army. The first thought of your executive, therefore, was of these two great public services; their first desire was to afford our colleagues in the navy and army an opportunity of discussing subjects in which they are specially interested and on which they might speak from experience and with authority. No subject concerns them more intimately and at the same time all of us as members of the profession and as loyal citizens than the selection of the *personnel* to which the interests and honour of our country in relation to other States and our position as one of the great civilising powers are entrusted. The physical qualifications of all candidates and recruits are determined by them and they are themselves primarily responsible for the admission of the boys and men whose health and efficiency they have afterwards to preserve. Your executive have great reason to be gratified with the way in which their plan to discuss the tests for admission into the public services has been received by the Association. Such a discussion, opened by Sir Dyce Duckworth and spoken to by distinguished officers, cannot fail to be a practical success. But, in addition to these attractions, we can promise you that the high level of the discussion will be sustained by many eminent civil authorities at home; by Professor Osler, a worthy representative of our cousins across the Atlantic, who have lately been anxiously concerned with the fitness of their own combatant services consequent on an acute recrudescence of that Anglo-Saxon disposition to rove and conquer which has always been an endemic trouble in the Old Country; by Dr. Manson, who will give us the benefit of his intimate and well-considered experience of the health of officers in the Far East; by Major W. Turner of Gibraltar; and by Dr. Wallace and Dr. Sykes of Southsea, both of whom are in a position to submit to us the conclusions at which they have arrived after the deliberate consideration of this subject during a professional life spent in a community the majority of whom are either beginning, or following, or have retired from, naval and military life. Let us hope, also, that the universal importance of the subject may induce some of our continental colleagues, all of whom have had personal experience of military service, to offer us their views on the proper standards of health and fitness. In striking contrast with Portsmouth and its endless suggestions of strength, effort, activity, the protection of our ceaseless stream of commerce and the encouragement to the utmost of our national disposition to colonise and civilise every corner of the globe is the peaceful island that lies on the other side of the Solent. In it there are climate and every proper provision for those who have earned rest, quiet, and retirement after a laborious and adventurous life, for the delicate, for the infirm, and for that unhappily large class of the community with whom we are most concerned, the victims of diseases of the chest, particularly tuberculosis. The Isle of Wight and the coast region of the south of Hampshire and Dorset, with Netley, Southampton, the New Forest, Milford-on-Sea, Southbourne, Bournemouth, Swanage, and Weymouth, are the type of English winter quarters for the phthisical, vying in this respect with the health resorts of Devon and Cornwall on the West and of Sussex and Kent on the east. In this extensive region there have settled many distinguished members of our Association who devote themselves mainly or entirely to the study and treatment of tuberculosis and to whom we who live and work elsewhere commit a considerable proportion of our chest patients every winter. Naturally, the second direction in which the officers of this section turned for a subject of useful discussion was tuberculosis; and, indeed, the extraordinary interest being manifested at present in the treatment of this disease of itself justifies the choice. And inasmuch as we have now departed from earlier empirical methods of dealing with a matter of this kind, now that we have a firm basis of etiological and pathological facts on which to work, we resolved not to confine ourselves in this discussion to the bare question of treatment, but to include prevention also; and we thought it wise to ask that distinguished master of medicine, Professor Allbutt, to introduce the subject with an essay which we felt would be characterised by his accustomed breadth and at the same time penetration of view, as well as by the felicity of thought and expression which have made so many of his addresses and writings instructive, suggestive, and fruitful even beyond their immediate exposition of the facts on which they were based. I repeat that we expect great things from this discussion. It may be somewhat premature to inquire what the results are of the open-air treatment of tuberculosis, at any rate in this country; but I am confident that we shall undertake the discussion with the enthusiasm which is begotten of the consciousness of rapidly increasing knowledge."

A discussion on "The Medical Tests required at Present for Admission to the Services" was opened by a paper from Sir DYCE DUCKWORTH, which was in his unavoidable absence read by Dr. J. MITCHELL BRUCE.

This paper was followed by an animated debate, in which Professor W. OSLER, Dr. E. J. WALLACE, Major W. TURNER, R.A.M.C., Dr. T. D. SAVILL, Dr. J. BARR, Surgeon-General H. S. MUIR (Deputy-Director-General, R.A.M.D.), Surgeon-General CUFFE (Principal Medical Officer at Portsmouth), Dr. W. CALWELL, Colonel WELCH, and Dr. MITCHELL BRUCE took part.

This debate was followed by the reading of three papers on Uric Acid: (1) by Dr. A. HAIG on Uric Acid and its Circulation, some Methods of Estimating its Effects; (2) by Dr. A. P. LUFF on the Gelatinous Form of Sodium Biurate and its Bearing on the Pathology of Gout; and (3) by Dr. WM. BAIN, an Experimental Contribution to the Study of Gout. In the discussion which followed Dr. W. SYKES, Dr. W. J. TYSON, and Dr. MITCHELL BRUCE took part. Dr. HAIG, Dr. LUFF, and Dr. BAIN replied.

SURGERY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address in this section, delivered by Mr. H. T. BUTLIN, surgeon to St. Bartholomew's Hospital, occupied only a very short space of time.

Two special discussions had been arranged for—viz., the Diagnosis and Treatment of Gunshot Wounds of the Abdomen and the Prevention and Treatment of Syphilis in the Army and Navy. "The object of such a meeting as ours is to afford opportunity for the exhibition and discussion of new materials; the interchange of ideas; the consideration of subjects with respect to which there is diversity of opinion, and the like. But, in addition, the mere meeting of men who are not often brought in contact is in itself a great advantage, and reference has been made to the benefit which is derived from it on more than one occasion. At Portsmouth we are peculiarly fortunate in this respect. For over and above medical men and medical women from all parts

of the United Kingdom and the colonies we have here a large number of naval and military medical officers, many of whom are distinguished in their respective services. The meetings of the Association are rarely graced by the presence of so large a number of them as we have every reason to expect to see this week. We trust they will take an active part in the business of the section, for we hope to learn many things from them of which a long experience has made them masters, and which we only know, as it were, by reflection. But to ensure their active coöperation we have arranged that the introduction of each of the two discussions shall be delivered by our naval and military colleagues, and we have taken care that the subjects shall be of peculiar interest to the shipmen and the soldiers. At the same time we have been careful to select subjects which are of sufficiently wide interest to attract civil as well as fighting medical men. For instance, gunshot wounds of the abdomen have been studied by surgeons who are not attached either to the navy or the army. Of late years the use of firearms in civil life has increased alarmingly. If a young man has a grudge against his fellow-workman he buys a pistol and shoots him; if a youth quarrels with a maiden he shoots her, sometimes fatally; then turns the weapon against himself, but rarely with such success that he blows out the little brains he has. The statistical tables of my hospital (St. Bartholomew's) illustrate in a remarkable manner the increase in the number of wounds due to firearms. In the seventies and early eighties we used to have an average of about three cases in a year. For some years past we have had an average of 11 or 12 cases every year. And during last year I had under my own care four patients with bullet wounds of the chest whose cases have been put together by my former house surgeons for our surgical section. At this rate we may hope by-and-by to become as cunning in the diagnosis and treatment of gunshot wounds as our naval and military brethren. I do not know whether there is any essential difference in the character of gunshot wounds in civil and in military practice provided the weapon is the same in both instances. But I suppose it rarely is the same. Some of the pistols used are very good, but some of them are little better than toys. The moral effect on the patient is, however, much the same whether the weapon be good or bad. If he is shot point blank and from a short distance he is horribly frightened and fully expects to die. He cannot believe escape is possible, so that we have to deal with a mental distress much greater than that from which the soldier suffers from a wound which may or may not be dangerous in itself. I was called down to the hospital one evening to see two young men who had been shot each in the chest and at very close quarters. One of them appeared to be seriously injured and was very ill for several days. He breathed with difficulty and made no outcry, but the other bewailed his fate in loud groans, and as the bullet had struck him full in the chest and the assassin was only about four feet distant from him he fully believed that his time was come. My class was disposed to take a similar view, but when I came to examine him I discovered that he presented no sign of serious injury and was not in the least likely to die. The prognosis of rapid recovery was fully borne out and at this day he is as sound as he ever was. The civil mind can scarcely believe in such good fortune. The other subject for discussion seems at the first sight to belong almost wholly to the navy and the army. Indeed, it is worded as if it were intended to be of exclusive interest. But this is only apparent and those who look closely into the matter will see that it is of almost greater interest to non-military than to military persons. The number of men suffering from venereal diseases in certain sections of the army is enormous. To give an example, the ratio per 1000 of soldiers in India 'constantly sick' of venereal disease during the year 1897 was 39·41; in the West Indies during the same year it was 35·56; and in the United Kingdom it was nearly 12 per 1000. Fevers, agues, and even local injuries are trivial disabling agencies compared with syphilis and gonorrhœa. No wonder the Legislature is concerned at such a frightful record of daily sickness and disability. No wonder the subject for the next Parkes Memorial Prize is, 'Venereal Diseases in the British and Indian Armies—Their Prevalence and Prevention.' Unhappily, the mischief does not end in the mere sickness of the soldier during his period of service. The treatment of syphilis, particularly, is very inefficient and there is no machinery for prolonged continuous treatment which might effect a permanent cure of the disease. The consequence is that every year a vast number of soldiers and sailors suffering from syphilis are let loose upon the community and convey the disease to women and, through them, to children, so that what with the probability of future outbreaks of syphilis in the men themselves and the infection of women and children there can be no question that the health of a considerable portion of the community is seriously impaired both at present and for the future. The prevention and treatment of syphilis in the navy and army is a subject in which we are deeply interested."

A discussion on the Diagnosis and Treatment of Gunshot Wounds of the Abdomen was then opened by Colonel STEVENSON, R.A.M.C., Professor of Military Surgery at Netley, who was followed by Dr. WARD COUSINS (the President of the Association), Dr. A. BARRY BLACKER, Major BEEVOR, R.A.M.C., Mr. DAMER HARRISSON, Mr. CLEMENT LUCAS, Dr. JAMES MURPHY, Mr. J. PAUL BUSH, and Surgeon-General O'DWYER. After Colonel STEVENSON had replied,

Mr. R. CLEMENT LUCAS read a paper detailing two cases showing the value of x-rays in surgery: (1) Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after Localisation by the X-Rays; and (2) Removal of a Bullet from the Front of the Second Cervical Vertebra after Localisation by the X-Rays. The paper was discussed by Mr. DAMER HARRISSON and Mr. BUTLIN.

Dr. WALKER DOWNIE read a paper on Two cases of Sarcoma of the Tongue and exhibibited the specimens, sections, and photographs, and Mr. BUTLIN discussed the paper.

Mr. J. PAUL BUSH contributed a paper on Some Operations on the Jaws for Extensive Malignant Disease, and Mr. DAMER HARRISSON, Mr. BUTLIN, and Mr. CLEMENT LUCAS joined in the discussion.

OBSTETRICS AND GYNÆCOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential remarks in this section were delivered by Dr. G. GRANVILLE BANTOCK, Consulting Surgeon to the Samaritan Free Hospital, who made of his address a plea for conservative gynæcology.

"It is not my intention," he said, "to occupy any considerable portion of the time at our disposal, for I conceive it to be the duty of the President rather to keep himself in the background as much as possible. For several years past I have viewed with much concern a strong and, I fear, a growing tendency to resort to the knife too frequently—in other words, a *cacoëthes operandi*—instead of a reliance on measures of a more simple and conservative character, and this is associated with a tendency to 'run amok' whenever a new idea is suggested. This is capable of illustration by many examples. Who does not know, for instance, how that eminently useful operation which goes by the name of its inventor—I mean Emmet's operation for the repair of a lacerated cervix—has been 'done to death,' until its inventor had to protest against too much zeal? Again, it seems to be sufficient in the eyes of some men that a woman should have a fibroid, however small, in her uterus to justify them in not only proposing the total removal of the generative organs, but even in urging submission by picturing a prospect of pain and penalties. It was an idea of the late M. Péan that a fibroid was essentially a malignant growth that must be removed some day, and some of the younger generation seem to have adopted that view. When the life-history of the uterine fibroid comes to be written it will be seen how erroneous that idea is. A fibroid tumour does not necessarily interfere with impregnation, the full development of the fœtus and its safe delivery, nor with the repetition of the process again and again. Fallacious arguments have been drawn from the supposed analogy between the ovarian tumour and the fibroid, but it is impossible to establish any analogy between these two diseases. Who has heard of an ovarian tumour disappearing except by the hand of the surgeon? On the other hand, who has *not* heard of fibroid tumours disappearing under various conditions? Again, if a woman complain of pain in the pelvis, especially in either ovarian region, as the result of an abortion, chronic uterine congestion, or follicular disease of the cervix, or if she present symptoms attributable to the minor forms of derangement of the generative apparatus, she is deemed to require the removal of the appendages; and if she should be the subject of an uncomplicated retroversion which an ill-devised and ill-adapted pessary has

failed to relieve, then she must undergo an operation either by the vaginal or the abdominal route for fixing it in position. I have seen many examples of all these in which I have felt it my duty to advise against operation and I do not know of a single case in which there has been reason for regret that that advice has been acted upon, while on the contrary I have positive evidence of its soundness in many cases. With regard to the case of uncomplicated retroversion I have never seen the necessity for any operation, either that senseless method of fixing the organ by the vaginal route or the more rational method—of course on the assumption of its necessity—by the abdominal route. It would be taking a charitable view of the matter to say that errors of diagnosis are answerable for many mistakes in practice. It was a maxim of the late Mr. Lawson Tait, to whose initiative gynæcology owes so much and who has left the impress of his genius indelibly stamped upon the face of gynæcology, 'When in doubt, open the abdomen.' But his words were much misunderstood. He did not mean that the abdomen should be opened to solve a doubt as to whether there was disease or not, but to ascertain the exact nature of a diseased condition of the existence of which there could be no doubt, which is a very different thing. An idea of recent origin is that the ovary secretes a something which is of service in the economy, and that whenever it is possible in an operation involving of necessity the removal of only a part of the generative apparatus one or both ovaries should be left. There is not an atom of evidence to support that idea. The ovary was evidently devised for the purpose of perpetuating the species by providing ova, and in the normal state, having discharged that function, it atrophies and becomes not only a useless but a dangerous organ, for, as we only too well know, it is very liable to disease. In a very large proportion of cases disease attacks this organ long after it has served its purpose, and it seems to me rather one's duty to secure the removal of such an unsatisfactory appendage when opportunity offers than to take steps for its retention. In my own practice I have had to remove both ovaries in a large number of cases. I have never willingly left an ovary when the uterus or its Fallopian tube has been removed, and over and over again patients thus deprived of both these organs have testified by word of mouth, confirmed by appearances, to a condition of good health, mental and physical, that had not been experienced for years previously, although these organs played no part in bringing about the disease which involved their removal. On the other hand, it has occurred to me to have to remove the second ovary after an interval of as many as 11 and even 18 years. Surely the possibility of such an occurrence is a strong argument against the practice in question. Lawson Tait was much nearer the mark when he urged that the removal of the second ovary—as in the case of the appendages—should become a rule of practice, because of the frequency with which it was subsequently attacked."

Dr. Bantock concluded his remarks by warning his audience not to promulgate their opinions hastily or upon insufficient evidence, but rather to be moderate and patient in their assumptions of successful results.

The Treatment of Fever following Delivery, with Special Reference to Serum Therapy.

The first discussion was then introduced by a paper on this subject by Dr. HERBERT SPENCER, obstetric physician to University College Hospital. Dr. Spencer distinguished four groups of cases of fever following delivery. The first, often called "one-day fever," was due to emotion, copræmia, or other transitory causes; the second was due to complications which were not referable to labour, such as influenza, scarlet fever, acute phthisis, and typhoid fever; the third was due to infection from pre-existing pelvic lesions, such as pyosalpinx, appendicitis, &c.; and the fourth was due to external infection forming what was generally understood as "puerperal fever." In discussing the prophylaxis of puerperal fever Dr. Spencer expressed the opinion that it was not necessary for a medical man to abstain from practice when attending such cases, as thorough disinfection will at once enable him to attend other women with safety. Coming to the serum treatment he pointed out that a large number of observations had now been made upon its use, over 350 cases having been collected by a committee of the American Gynæcological Society. Among these cases there was a mortality of 33 per cent., but the natural mortality of the disease was probably not greater than that. The conclusions he had arrived at were (1) that, as normally applied, serum therapy has no scientific basis in the treatment of puerperal fever; (2) that it has not lowered the mortality; (3) that it usually lowers the temperature and sometimes improves the general condition; and (4) that its use is not free from danger.

A paper was also read by Dr. ARNOLD LEA on Two Cases of Puerperal Septicæmia due to Streptococcic Infection, and Dr. WHITELOCKE read notes of two cases of puerperal fever in which he believed that great benefit resulted from the use of serum. In the discussion that followed Professor MURDOCH CAMERON, Dr. SHAW-MACKENZIE, Dr. PURSLOW, Dr. INGLIS PARSONS, and Mr. MORE-MADDEN made remarks.

A paper was also read by Professor MURDOCH CAMERON on a case of Rupture of the Uterus, Missed Labour, and Delivery Three Months Later, and in the discussion which followed Mr. MORE-MADDEN, Dr. JOHNSON, and Dr. KEALY made remarks.

Professor BYERS demonstrated an apparatus for obtaining the secretions from the uterine cavity in a sterilised tube for bacteriological examination and emphasised the fact that it was of no use to administer the serum without first demonstrating the presence of streptococci. The discussion was continued by Major PECK, I.M.S., Dr. JOHNSON, Dr. DRAPER, Dr. KEALY, Dr. EDGAR BARNES, and Mr. J. W. TAYLOR, and Dr. SPENCER replied.

STATE MEDICINE.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address in this section was delivered by Dr. GEORGE WILSON, LL.D., medical officer of health of the Mid-Warwick district, who spoke, as he promised that he would, with great frankness.

"In the brief interval at my disposal there is no subject on which I desire to speak out with more direct frankness and sincerity than the relations of bacteriological research and methods of treatment to preventive medicine. And at the outset I may be permitted to say that ever since the great Pasteur announced the results of his prophylactic inoculations with respect more especially to fowl cholera and anthrax I have been a close, and I hope unbiased, student of bacteriological literature. I may say, too, that my attitude towards these newer methods of treatment was at first one of expectancy, though I could never see that there was any legitimate analogy between them and Jenner's great discovery on which they are admittedly based, and the more I have studied them the more firmly I feel convinced that they are based on errors and are the outcome of illogical inductions, every one of them. That, you will say, is a very strong statement to make, but after all these long years of flickering hope I am prepared to contend that the indiscriminate maiming and slaughter of animal life with which these bacteriological methods of research and experimentation have been inseparably associated cannot be proved to have saved one single human life or lessened in any appreciable degree the load of human suffering. I have ventured to make that pronouncement before, but in halting academic fashion; I reiterate it here and now with the strongest and fullest conviction. In order to make my contention as clear as possible let me refer for a moment to the doctrine of immunity as illustrated by small-pox and vaccination. We know that there are certain infectious diseases one attack of which protects, as a rule, against any future attack and that of all diseases this can be more emphatically said of small-pox than of any other. That was why inoculation was practised for a time and was successful so far as the individual was concerned. The person inoculated suffered from the disease because he was inoculated by the actual *materies morbi*, but he ran the risk of suffering from perhaps a very severe attack and became a centre of infection unless he was isolated. Now, Jenner's happy induction was this: he knew that it was common talk that milkers who suffered from sores on their hands which they contracted from the vesicles on the teats of cows infected with cow-pox were protected against small-pox. He therefore concluded that if he inoculated with the matter contained in the vesicles of cow-pox instead of with small-pox matter he might be able to confer immunity against small-pox. He tried the experiment and tested it over and over again, and not only so, but by using the matter from the vesicle produced by vaccination he made the further discovery that he could confer immunity from small-pox by vaccinating from person to person—that is, by

arm-to-arm vaccination in continuous series with this matter which had been originally obtained from the vesicles of vaccinia or cow-pox. He thus made it clear that cow-pox or vaccinia was a modified form of small-pox and, as we all know, the experiment, though not an easy one, has been tried successfully and repeatedly to produce cow-pox in the cow or calf by inoculating the animal with the virus of small-pox. Vaccination, therefore, induces vaccinia and vaccinia protects against small-pox because it is a modified form of the disease. Unlike small-pox itself it does not confer absolute immunity, as Jenner imagined it would. It only confers a modified degree of protection against small-pox because vaccinia is only a modified form of the disease itself by transmission of the virus through the cow or calf. And yet the protection afforded by successful primary vaccination is of such value that the successfully vaccinated in infancy are, as a rule, completely protected up to the age of 10 or 12 and are always made more or less immune through their whole lifetime, so that if they do become infected the disease manifests itself in a mild or modified form. But in order to confer complete protection primary vaccination must be supplemented by revaccination. Now, gentlemen, however much you may dissent from my first statement, I feel sure I can claim, I may almost say, universal agreement with this very rudimentary statement concerning small-pox and vaccination. But it has been admitted by Pasteur, Koch, and all of their followers that their methods of prophylactics and cure are based on Jenner's happy inductive inspiration. Let me now further clear the way by a few other comparisons. In the first place, bacteriologists have failed to discover any pathogenic microbe either of small-pox or vaccinia which they can isolate with certainty and I venture to predict that they will never discover any which they can label and cultivate as the *causa causans* of either disease. The few pathogenic microbes which bacteriologists have discovered associated with human disease in which they can isolate and cultivate are those of tuberculosis, diphtheria, enteric fever, cholera, and plague; but all these are found associated with necrosed tissues, and it is open to argument whether, instead of being labeled the unconditioned *cause* of those respective diseases, they may not be performing a benign function in changing the necrosed tissues into harmless products, just as various kinds of micro-organisms are necessary to change filth and all dead organic matter into harmless matter. No specific organism has been discovered in respect to scarlet fever, whooping-cough, measles, or typhus fever; and, even granting the spirilla of continued fever and the micro-organisms of influenza, they cannot be isolated and cultivated. Then, again, vaccine lymph must be taken from the vesicle at a certain stage of development. It is cultivated, and can only be cultivated in the living body. When successfully used, as in vaccination, it is followed by manifestations of a definite disease known as vaccinia, with a well-defined incubation period and well-defined and characteristic symptoms—a varying amount of pyrexia, tumefaction at the point of vaccination—the vesicular stage and the pustular stage. Let me now go a step further and institute comparisons with the so-called results of serum therapeutics. We know that a successfully vaccinated cow or calf is made immune. We can therefore use the serum of a perfectly immune animal, but on reading all the experiments in this direction, as summarised by Dr. Copeman in his admirable work on vaccination, the serum of an immunised animal confers at the utmost only a doubtful and short-lived immunity, so doubtful as to be discarded altogether, and as a cure for small-pox it is of still more questionable efficacy. On all these grounds, gentlemen, I boldly reiterate my statement that there is no legitimate analogy between Jenner's great discovery and these newer methods of prophylaxis or cure which are based on that discovery. And in passing I wish to say that there has never been a more deplorable travesty of a great name than to designate the Institute of Preventive Medicine the Jenner Institute. Jenner's experimental altar was no sacrificial altar, but anyone who has studied the recent widespread antagonism against vaccination can see that one of the most potent of them has been the rush of the younger men in the profession to use these antitoxin serums. The medical profession—though I may say they believe to a man in vaccination and revaccination as a full and complete protection against small-pox—are largely to blame for this revolt and I boldly say that there should be some pause in these ruthless lines of experimentation to take a calm and candid review of the whole position of bacteriological methods in the prevention or cure of human disease. I have not allied myself to the anti-vivisectionists, but I accuse my profession of misleading the public as to the cruelties and horrors which are perpetrated on animal life. I have the highest respect for Lord Lister and no one who knows him could accuse him of wilful misrepresentation, but when he stated, as he did in his speech at the opening of the bacteriological laboratory in Liverpool last year, that the actual pain involved in these experiments is commonly of the most trifling description he was guilty of a *suppressio veri* of the most palpable kind which could only be accounted for at the time by his ignorance of the actual facts. I admit that in the mere operation of injecting a virus, whether cultivated or not, there may be little or no pain, but the cruelty does not lie in the operation itself, which is permitted to be performed without anæsthetics, but in the after-effects. Whether so-called toxins are injected under the skin, into the peritoneum, into the cranium, under the dura mater, into the pleural cavity, into the veins, eyes, or other organs—and all these methods are ruthlessly practised—there is the long-drawn-out agony. The animal so innocently operated on may have to live days, weeks, or months with no anæsthetic to assuage its sufferings and nothing but death to relieve. And what triumphs has bacteriology achieved in stemming the tide of human disease on these empirical lines? Pasteur's anti-rabic vaccination is, I believe—and others with me—a delusion. Koch's tuberculin cure for phthisis has long since been labeled as worse than worthless. As a test even for bovine tuberculosis tuberculin possesses only a secondary and not a specific value. The much-vaunted antitoxin cure for diphtheria does not command the universal approval of even the physicians of the metropolitan fever hospitals. Just because tetanic antitoxin serum has failed when used subcutaneously medical men have felt justified in deliberately trephining patients and injecting it into the brain substance, and one medical man has had the courage to confess, after making a post-mortem examination of his patient, that such treatment can no longer be justified. The sera used for the treatment of other diseases—such as the pneumococcic serum, the serum used for puerperal fever (the serum which was so much vaunted as another great discovery), and Sanarelli's serum for the cure of yellow fever—are all of them allowed to slip into the lap of forgetfulness. I know these statements of mine will not command assent, but I have no axe of my own to grind except the clean-cut edge of truth, which I admit even bacteriologists are striving empirically to sharpen. I accuse none of want of good faith, but I think I can see—and will strive to make others see—that in the protection afforded by vaccination against small-pox Nature gives no authority or warranty for these reckless experiments. The bacteriologists so dominate the public press that we almost seem to live in a bacillus-stricken world. And so far as preventive medicine is concerned bacteriology has rather led us on false lines in assuming that the pathogenic microbe of any disease is the *causa causans* of that disease. I venture to say that the unconditional microbe need have no terrors for humanity. We know that there are certain diseases which are notoriously infectious, therefore we isolate. We know that there are others which breed on filth, therefore we say be clean and insist on cleanliness of house and home, of the water we drink, of the food we eat, and of the air we breathe. Bacteriology has assisted, and largely assisted, preventive efforts at disinfection, isolation, and so on, but it can never confer immunity against disease except by using minimal doses of the virus of that disease, and that virus I say to be effectual can only be cultivated and bred in the living body, not cultivated artificially in organic media. I do not hesitate to designate the whole list of therapeutic sera as the materia medica of septic therapeutics. We talk of aseptic surgery and we begin to know something of its absurd ritual when it is gravely advanced that even masks are to be worn on the face because the beard of the surgeon may harbour pathogenic germs. Hahnemann was denounced for his absurd doctrine of *similia similibus curantur*. We are all accepting it now on these utterly empirical lines and institute a crusade against tuberculosis as if the tubercle bacillus was the sole *causa causans* of the disease. I say that we can only fight phthisis on the old lines, by improving heritage when that is possible, by improving the homes and conditions of life and labour which are always possible and always call loudly for interference. But this insane hunt after the tubercle

bacillus, as if it could be bottled up in a twopenny-halfpenny spittoon and got rid of, is the insanest crusade ever instituted on illogical lines. Bacteriologists are not sure of their tuberculosis bacillus and it is a moot question whether the bacillus which is found in milk and which is labeled as the tubercle bacillus is not a cow-dung bacillus. A distinguished bacteriologist has admitted it; I venture to reiterate it. Institute sanatoria all over the country by all means—people will flock to them who can pay; but so far as public bodies are concerned, the guardians of the insane and the poor—I say this and deliberately—your asylums are full of these phthisical patients, your huge workhouses are full of them. Begin by experimenting on them and do not declaim all over the country that this crusade, because it has been patronised, and rightly patronised, by Royalty is to seize hold of the national mind. It looks to me as if we were returning to the days when the king's touch was regarded as the cure for king's evil and when all sorts of decoctions were the prized cures for human infirmities. The physician can never cure, he can only direct and assist nature in eliminating the *materies morbi*, whatever it may be. In my student days I was taught that there was such an influence, such a *vis* as the *vis medicatrix naturæ*. That appears to be no longer recognised as of any efficacy, and now when a patient does not die or survives bacteriological treatment he is claimed as an instance of cure. For years back the papers have been flooded with these isolated mythical cures and I am told that the consensus of the medical profession is against me; but I console myself with the reflection that medical opinion in these days means only the opinion of bacteriologists, who are, I admit, our smartest men, win our research scholarships, and imbibe their creeds on the continent; and so they return and become our teachers; but the whole of bacteriological theory and practice is steeped with commercial interests. Behring has patented his diphtheria antitoxic serum on the continent; Koch for years has made a princely royalty out of his tuberculin. Little Denmark has boomed her butter trade through tuberculin and we in this country, it seems to me, cannot accept the gospel of prevention and cure except as it is preached in Paris, Berlin, Vienna, Lille, or other continental schools. Why is Germany crowding itself with sanatoria for consumption. Shall I tell you? Just because Germany in 1889 passed an Act that every German with an income of £150 or less must insure against sickness or old age. Last year the number of Germans so insured amounted to over 11,000,000, and these insurance societies, to save their coffers, and receive their insurance subscriptions so long as they can, start these sanatoria in self-protection. That may be a great argument for the establishment of sanatoria, but it is also a great argument for the establishment of thrifty German ways. I merely mention the fact because I do not wish it to be constantly flung in our face, as it is, that we are behindhand in this matter or any other efforts at the prevention of disease or lessening of suffering."

Dr. E. SEATON, medical officer of health of the county of Surrey, then opened a discussion upon Recent Vaccination Legislation and the Prevention of Small-pox. He raised various practical points such as domiciliary visitation and the way in which vaccination is to be performed in future. Dr. C. R. DRYSDALE, Dr. J. GROVES, Dr. J. B. BRIERLEY, Mr. GARRETT HORDER, and Mr. COLIN CAMPBELL spoke on the subject.

A paper was then read by Mr. COLIN CAMPBELL on the Technique of Vaccination. The speaker described a special case containing all requisites for aseptic operation. Dr. J. SINCLAIR HOLDEN continued the discussion.

Dr. PETRONELL MANBY, assistant medical officer of health of the city of Liverpool, contributed a paper on Meat Inspection and the Abolition of Private Slaughterhouses. Dr. GEORGE WILSON, Sir WILLIAM PINK (member of the Portsmouth Town Council), Dr. SYDNEY MARSDEN, and Dr. DRYSDALE spoke on the subject, and Dr. MANBY replied.

Dr. SYDNEY MARSDEN, medical officer of health of Birkenhead, read a paper on Overcrowding in Secondary Schools. Dr. SIDNEY DAVIES, and Dr. DRYSDALE spoke, and in reply Dr. MARSDEN moved the following resolution, which was seconded by Dr. GROVES—viz.:

> That the Council of the Association urge upon the Government the necessity of the sanitary inspection of all schools.

The motion was carried with one dissentient and the Section then adjourned.

PSYCHOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address by Dr. DAVID NICOLSON, C.B., Lord Chancellor's Visitor in Lunacy, dealt with the question: "Can the Reproachable Differences of Medical Opinion in Lunacy Cases be Obviated." At its conclusion a vote of thanks was proposed by Dr. ORANGE, seconded by Dr. BRYAN, and carried unanimously.

Dr. J. F. SUTHERLAND, Deputy Commissioner in Lunacy for Scotland, read a paper on the Urgency of Legislation for the Well-to-do Inebriate. A discussion followed in which Dr. SEYMOUR TUKE, Mr. BRISCOE, Dr. LLOYD ANDRIEZEN, Dr. MANNING, Dr. SEWARD, Dr. FLETCHER BEACH, and the PRESIDENT took part.

Dr. G. ARCHDALL REID read a paper on Alcoholism in relation to Heredity. The paper was discussed by Dr. LLOYD ANDRIEZEN, Mr. BRISCOE, Dr. SUTHERLAND, Dr. SEYMOUR TUKE, and Dr. FLETCHER BEACH.

Dr. G. H. SAVAGE, Lecturer in Mental Diseases at Guy's Hospital, opened a discussion on the Temporary Care of Incipient Cases of Insanity. The discussion was taken up by Dr. LIONEL WEATHERLY, Dr. SUTHERLAND, and Dr. SEYMOUR TUKE, and in view of its importance it was adjourned till next day.

ANATOMY AND PHYSIOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address in this section was delivered by Dr. J. J. CHARLES, Professor of Anatomy and Physiology in Queen's College, Cork. His address was a long and eloquent summary of the advances which have been made recently in physiology all over the world, and it concluded with a patriotic reminder of the great progress achieved of late years by physiology in Great Britain and Ireland. "While we have, it is true, pursued anatomy with more or less success at all times," he said, "physiology has, as you are aware, suffered long and deeply from neglect. This neglect was, of course, attended by its just and inevitable Nemesis in the comparative barrenness of the English school of physiology; for science, like religion, metes out its rewards only to those who diligently seek it. But for the diligent seeker we had to look elsewhere than at home. In the numerous and well-equipped laboratories of Germany hosts of ardent investigators have been long at work and accordingly till of late Germany overshadowed all other countries by her progress in physiological research. During this unfruitful period of physiology at home our students were obliged to receive a large part of their knowledge from German sources, and 'made in Germany' became as it were the hall-mark of most of the best work of the time. But this unhappy period has now passed away, and its reproach has been removed by the many brilliant English physiologists whose names have appeared in the course of this address as well as by others whose works belong to earlier years; and the 'Queen of the Natural Sciences,' as Du Bois Reymond rightly designated physiology, has nowhere more zealous and devoted subjects than in the British Isles. English physiologists have of late years contributed their full share to the advancement of the science, and the zeal they have shown in the cause of research has, no doubt, been owing to a large extent to the Physiological Society and to the Cambridge and London Schools of Medicine, under the able guidance and leadership of Sir Michael Foster, Sir John Burdon-Sanderson, and Professor Schäfer."

Mr. STANLEY BOYD then read a paper on the Interaction between the Ovaries and the Mammary Glands. This interaction in the case of removal of both ovaries sometimes, he pointed out, caused an apparent quiescence and retrogression of clearly demonstrated cancerous growths in the breast.

Dr. AMAND ROUTH said that ovulation went on as usual after both breasts were removed and that during pregnancy lactation was unaffected by both ovaries being removed. The discussion was continued by Dr. W. ANDERSON, Dr. L. MAYBURY, Mr. ROGER WILLIAMS (who emphasised the importance of the diagnosis in the cases quoted being absolutely correct for the purposes of deduction), Mr. CANTLIE (who said that he had long taught, before the

question became so widely discussed, that there was a sort of ovarian neurosis in cancer), Dr. M. S. PEMBREY (who referred to the fact of the want of development of the breasts in sterile women), and the PRESIDENT (who commented on the effect of castration on the enlarged prostate gland).

The day's work in this section ended with an interesting statement from Mr. CANTLIE of his views on the division of the liver into right and left sides.

PATHOLOGY.

WEDNESDAY, AUGUST 2ND.

Dr. J. F. PAYNE presided over this Section and briefly introduced a discussion on the Pathology of Infective Endocarditis.

The subject was treated from a bacteriological standpoint by Dr. J. F. WASHBOURN, and in the debate which followed Mr. A. G. R. FOULERTON, Dr. F. J. POYNTON, Mr. W. C. C. PAKES, Dr. BERTRAM ABRAHAMS, Dr. LAZARUS-BARLOW, Dr. W. B. BULLOCH, Dr. J. H. BRYANT, Dr. H. M. TICKELL, Dr. THEODORE FISHER, Professor CLIFFORD ALLBUTT, Dr. OTTO J. KAUFFMANN, Dr. F. J. DRIVER, and Dr. PAYNE took part.

OPHTHALMOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address in this Section, delivered by Mr. SIMEON SNELL, Ophthalmic Surgeon to the Royal Infirmary, Sheffield, and Professor of Ophthalmology, University College, Sheffield, was on the Prevention of Eye Accidents occurring in Trades. "No one," he said, "can have seen much of ophthalmic practice in such a large industrial centre as Sheffield without being painfully aware of the enormous destruction to sight occasioned annually by accident. I do not intend to burden my remarks with many statistics. A few figures are, however, necessary. The secretary of the Miners' Permanent Benefit Fund has given me the following statistics as to the proportionate frequency of eye accidents among miners to other accidents. The number of non-fatal accidents dealt with during the period from 1884 to 1898 was 48,262, and in 2506, or 20 per cent., of these the eye was injured. In many trades associated with iron and steel in all its varieties small foreign bodies are very prone to become lodged in the workmen's cornea. I take as an example the grinders. In the course of the day a grinder may get several foreign bodies fixed in his cornea, or days may elapse without such a mishap. 'Mote' is the name popularly given by the workmen to these particles in their eyes. If the cornea of a grinder be carefully examined with a magnifying glass it will not infrequently be found to be studded over with minute nebulæ; though, therefore, the damage done by each 'mote' may often not be serious, yet the frequent repetition by dulling the cornea will in many cases diminish the acuteness of vision. These particles may either be small fragments of stone or much more frequently small portions of steel or emery, which is largely used as a wheel for glazing cutlery and for other purposes. There can be no question that the grinder derives considerable immunity from these 'motes' by the employment of protective glasses. Several grinders whose ocular condition necessitated the wearing of spectacles have admitted the protection which they afforded. If further testimony be needed it can be found in the condition of the glasses after use for some time by a grinder. The surface of concave glasses which a grinder has used at his work are studded all over by small dots. In one specimen in my possession both surfaces are affected because the side of the glass had been changed, so that when one surface had been studded the position of the glass in the frame had been reversed and that which was next the eye had been placed externally and had also in turn become studded with marks. This may be regarded as what occurs to the cornea in consequence of the repeated lodgment of particles. In the various trades in which steel and iron are used the operatives are liable, though to a less degree than the grinder, to get these 'motes' into their eyes. Many workmen are skilful in removing 'motes' from their comrades' eyes. The number of foreign bodies which some of the men remove in the course of a day is very large. One man, a timekeeper at works where 1000 men besides outworkers were employed, told me that he had for 15 years at least been recognised as a skilful remover of 'motes.' Sometimes he has extracted a score or more a day; sometimes the number was much less, but he had not for many years passed a day without at least one case. He was not the only man with a surgical reputation at these works; others also removed motes. He used a lancet with the end blunted. It was quite clean, and he kept it so by either putting it on a strop or a whetstone. For the same purpose other men would use a lancet, pocket-knife blade, or even a pin, &c. Without doubt, in many instances these motes are skilfully removed; in others there is a good deal of bungling. The instruments generally used are unsuitable. Not infrequently cases come under observation in which sloughing corneal ulcers have resulted from the efforts made to remove a 'mote.' It seems to me not unlikely that a septic condition was set up in consequence of the uncleanly instruments which were so often employed. A member of a large firm has promised to provide the men at his works enjoying reputations for removing motes among his employés with such instruments as in my opinion would be suitable. After considering different means which could be adopted for sterilising spuds, the simplest device seems to me to be to provide a case containing a couple of iridium platinum blunt pointed spuds, together with a small spirit lamp, with directions printed in the top of the case saying that before use the extremity of the spud should be heated in the flame of the spirit lamp, or if this be not accessible in a gas or other flame which may be at hand. Messrs. Down Brothers have made such cases on my suggestion. A very large proportion of the accidents are occasioned in chipping the rough edges from steel and iron castings, ingots, and all kinds of iron and steel work. The sizes of the splinters vary from the most minute to others measuring some inches in length, and they may be thick or thin. The small fragments may be thrown off with such velocity that they penetrate the eyeball and become embedded in its interior, in some instances passing through the eyelid before reaching the globe. The destruction to sight in this way is very large. I have myself removed from the globe with the electro-magnet I believe more than 200 fragments of steel and iron, mostly projected into the eye in the manner I have just mentioned. Another class of severe injuries which are of common occurrence are burns from molten metal, for sparks and flashes fly about freely in almost every instance that molten metal is run into the moulds. Means can and should be adopted to endeavour to lessen the risks to sight which are at present associated with such important industries. My experience has shown me that there is less difficulty in enlisting the support of the employers than in obtaining the assent of the men to adopt precautionary measures. The cost of eye protectors for the men must be very moderate and any covering over the eyes should interfere with the sight as little as possible, if at all. Among ironworkers glass is practically out of the question. Even thick rock crystal, which has been suggested for some kinds of work in consequence of its thickness and peculiar manner of fracture, would hardly do. There are a variety of protectors in the market, but they have been little used. Gauze wire, fitting close to the eye like a cup and attached to the head by a string, is employed by stonebreakers and in some ironworks. The men complain of them as being hot and interfering with sight, but there is no question that such protectors afford considerable immunity from accident. Another practical point about protectors is that they should not be liable to rust. For this reason galvanised iron wire, or better, aluminium wire, is of service. I have had this netting made by Messrs. Priest and Ashmore, Sheffield, into protectors which cover the eyes and the adjacent parts. I have supplied workmen with these protectors who have used them for chipping, steel melting and other dangerous iron and steel work. I learn that they are regarded as satisfactory, that they answer their purpose well as protectors, and that the interference with sight is very little. The grinder will find that large glasses made of plain glass, or indeed his own spectacles should his refraction require their use, will afford great protection. Or he may use other protectors made with glass in front and gauze surrounding it.

Mr. RICHARDSON CROSS then introduced a discussion on Sympathetic Irritation in Connexion with Injuries to One Eye. Taking a broad view of the condition, which at present was not definitely to be distinguished from sympathetic ophthalmitis, he pointed out how it was associated with old shrunken eyes, with the wearing of glass eyes, and

even with an unsatisfactory nerve-stump and occurred in varying periods after the original injury. Whether it was due to microbic infection or to peripheral nerve injury was not yet clear, and experimental investigation was baffled by the apparent fact that it did not occur in animals under any conditions. The conclusion, however, seemed obvious that degenerate eyes should be removed with as little delay as possible, particularly if irritation supervened in the healthy globe.—Professor LANDOLT, Mr. MCHARDY, Surgeon-General CAYLEY, Mr. DEVEREUX MARSHALL, Mr. HERN, Dr. DE SCHWEINITZ, Mr. REEVE (Canada), Dr. BRONNER and the PRESIDENT took part in the discussion.

Papers were also read by Dr. BRONNER on the Treatment of Asthenopia by Homatropine, and by Mr. LODGE on the Removal of the Lens in High Grades of Myopia, in discussing which Mr. ARNOLD LAWSON, Mr. CROSS, Mr. JULER, and the PRESIDENT took part.

DISEASES OF CHILDREN.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address in this section, delivered by Mr. EDMUND OWEN, Surgeon to St. Mary's Hospital and Consulting Surgeon to the Hospital for Sick Children, Great Ormond-street, W.C., dealt with the subject of Ununited Fracture in Childhood.

"I propose," he said, "starting our work by asking two questions: (1) Why is non-union after fracture of the tibia and fibula in children of comparatively frequent occurrence? (2) Why does its treatment by operation so often end in amputation? It is because of the frequency with which the tibia and fibula are involved in pseudarthrosis in children that I suggest that we should confine our remarks to ununited fracture in the leg bones, though there is no reason why the condition as affecting other long bones, notably the clavicle, humerus, and femur, should not be alluded to for purposes of illustration. I have met with non-union after fracture of the clavicle in a child; but after all the defect did not prove a very serious one. The humerus is rarely the seat of pseudarthrosis in children, though in the adult it is often involved. So also with the shaft of the femur; it is frequently affected in adult life but rarely in children, and the only case of femoral pseudarthrosis which I have met with in a child recovered after a long rest without a cutting operation. The two great differences between ununited fracture in the child and the adult are these, that in the child the false joint is generally in the leg and that operative treatment is almost invariably futile. So far as I know, the first essay directing special attention to the subject of ununited fracture in children was by Sir James Paget in "Studies from Old Case-books" which was published in 1891. In it he gives brief records of three cases. In the cases on which I have operated there was apparently no local impediment to the consolidation; the broken ends of the tibia forming a salient anterior angle at the junction of the middle and lower third of the leg were in close apposition. No tendon or sequestrum interfered with them and they were surrounded and connected by a considerable amount of fibrous tissue which, unfortunately, failed to attain the higher development into bone. In the adult the chief cause of non-union after fracture is want of rest and possibly this is one of the causes of the frequent occurrence of pseudarthrosis in the child's broken tibia; the fracture is not detected and not treated and the child is carried about, the leg hanging over the mother's arm. Thus the weight of the foot constantly draws the lower end of the tibia backwards and the salient angle at the fracture is directed forwards. In the adult the humerus and femur are the bones the shafts of which are most often the seat of ununited fracture and with them resection of the pseudarthrosis and wiring the freshened ends of the bone always result in consolidation. But in children non-union most often occurs in the tibia and fibula, and, so far as my experience goes, fibrous union is the best result that follows operative treatment. But as fibrous union of a fracture of the tibia and fibula is of no practical value, the operative treatment very often ends in amputation. In his paper in the seventy-fifth volume of the Transactions of the Medical and Chirurgical Society Mr. D'Arcy Power gives a table of 72 cases of ununited fracture of the long bones in children, of which 45 occurred in the tibia and fibula, giving a percentage of 62·5. For the care and skill with which he has compiled and displayed this collection of cases Mr. Power has earned our gratitude, but it is a matter of regret to me that he—able physiologist as well as surgeon—had no suggestion to make as regards the explanation of the unsatisfactory treatment of the condition. As to the cause of the almost invariable failure of operative measures I regret to say that I have nothing definite to offer. It has been suggested that previous to its being fractured the bone may have been the seat of an obscure affection somewhat allied to mollities ossium. All I can say is that cutting down upon the seat of the fracture there was no remarkable softness of the bone. In the instances, however, in which I have operated long after the original injury there was an atrophic condition of the lower fragment of the tibia. The child's foot had been well enough developed, but the fragment between the ankle and the fracture had been in a case of infantile paralysis. The only theory which seems to be applicable is one which invokes the influence of the trophic nerves. I am, therefore, going to suggest that leading up to the fracture there is some subtle disturbance in the anterior cornu of the grey crescent of the cord inhibiting the due nutrition of the bone and rendering it weak and friable. I do not see how this theory could be confirmed or exploded except by a careful examination of transverse sections of the cord made in the case of an ununited fracture, and the opportunity of making such an investigation is not likely to present itself. I am sure that it would be very interesting to this Section if brief records of cases of ununited fracture could be laid before us; if we could be told of the operative measures adopted and of the ultimate result of such treatment. I have no personal knowledge of any case in which a surgeon has cured the defect; the cases which have been under my care have ended in amputation."

Mr. GEORGE MORGAN and Mr. A. H. TUBBY took part in the discussion which followed the address.

Dr. ROBERT MAGUIRE then read a paper on the Treatment of Pleuritic Effusions in Childhood from a medical standpoint and Mr. H. B. ROBINSON treated the same subject from the surgical standpoint. In the discussion which followed, the PRESIDENT, Dr. E. M. SYMPSON, Mr. A. H. TUBBY, Mr. F. STERLING, Dr. G. F. STILL, and Mr. GEORGE MORGAN took part, Dr. R. MAGUIRE and Mr. H. B. ROBINSON replying to the various points raised by the speakers.

Dr. G. F. STILL read a paper on Observations on the Morbid Anatomy of Tuberculosis in Childhood, with special reference to Channels of Infection, concerning which the PRESIDENT asked some questions to which Dr. STILL replied.

Mr. GEORGE MORGAN followed with a paper on Tuberculous Adenitis, on which Mr. H. B. ROBINSON made remarks.

PHARMACOLOGY AND THERAPEUTICS.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address in this section was delivered by Professor J. B. BRADBURY, Downing Professor of Medicine in the University of Cambridge and President of the section, who took as his subject "The Place of Pharmacology in the Medical Curriculum."

"For some time my mind has been exercised," he said, "as to the proper place of pharmacology in the medical curriculum. So far as I can make out there is a growing tendency for medical corporations, if we except the universities, to require less and less knowledge of drugs from candidates, which I think is much to be regretted. I have no wish to revert to the state of affairs when candidates were expected to have a minute knowledge of the distinctions between the different species of senna and cinchona, but the danger now is that they may not be able to recognise senna at all. And here may I say one word in praise of the new Pharmacopœia? I think it is a model of what such a work should be—accurate, learned, and not overburdened with details. I am surprised when I have to consult it at the extent and variety of information which it contains. The contents of such a book, so far as they bear directly or indirectly on prescribing, should be thoroughly mastered by all medical students, and I would make such knowledge a compulsory part of the curriculum. Think for a moment of what is required of a medical man once started in practice. A considerable part of his work is writing prescriptions for his patients, and yet in respect

of the knowledge of drugs and their action I maintain his education is often most imperfect. This brings me to the subject of pharmacology or the action of drugs on the body in health and in disease. Is it too much to expect those who are daily to prescribe remedies to be acquainted with what is known of their actions? Certainly not. Well, then, how can this best be taught? and where in the student's course is it to come in? I think, after anatomy and physiology, and alongside of pathology, I would make the first part of the final examination pharmacology and pathology—the sciences dealing respectively with disease and its treatment—and then the student should at the next stage be ready to apply the principles thus acquired to actual practice in connexion with his clinical medicine, surgery, and midwifery. The more intimately a student knows the action of the drugs which he prescribes, the greater will be his success in treatment, and it is much to be regretted that some of the Examining Boards require a student to acquire this knowledge only in a haphazard way, or at a premature stage of his course."

A discussion was then opened upon Headaches and their Treatment by Dr. LAUDER BRUNTON, who gave an interesting and characteristic discourse. The form of headache chiefly dealt with was that of migraine, which Dr. Brunton said was mainly due to toxins circulating in the blood. The great defence against this form of toxæmia was the liver which split up the poisonous products of digestion. As to the question why the head was generally affected Dr. Brunton pointed out that there would usually be found to be some form of weakness or strain in the head—e.g., a carious tooth, some error of refraction, or an inflamed tonsil. There was a form of "headache" which occurred in the abdomen—i.e., pain due to toxins causing as in the head, peripheral contraction with proximal dilatation of the vessels. With regard to treatment cholagogues were indicated and one of the most powerful, as pointed out by the late Professor Rutherford, was salicylate of soda. He himself had found it act better when taken in conjunction with one of the bromides. Whatever was taken must be taken before the headache was established, for when it was thoroughly so absorption by the stomach was at a standstill and no drug given by the stomach would have any effect.

Dr. DUNDAS GRANT followed with a paper which dealt with the matter, as he confessed, from a purely specialist point of view. Dr. Lauder Brunton had shown how there generally existed some weak point and he was going to deal with the weak points of the nose.

LARYNGOLOGY AND OTOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

The Presidential Address in this Section was delivered by Dr. E. CRESSWELL BABER, Surgeon to the Brighton and Sussex Throat and Ear Hospital, who took as his subject "Thirty Years' Progress in Rhinology."

"It is just thirty years ago," he said, "that Wilhelm Meyer of Copenhagen brought his eventful discovery of adenoid vegetations to this country and read a paper on it before the Royal Medical and Chirurgical Society in London on Nov. 23rd, 1869, which forms a landmark in modern rhinology. The paper attracted little immediate attention in this country and it was not until some years after its publication that we find any original articles on the subject in England. Meyer, as he acknowledged, had been preceded in his discovery by the publication of scattered cases of adenoid vegetations by Voltolini and Loewenberg. The way for Meyer's discovery had been paved by the invention by Czermak some ten years previously of the art of posterior rhinoscopy. Anterior rhinoscopy, which is, of course, of much older date, cannot be said to have been much cultivated until 1859, when Markusovsky invented the speculum bearing his name. In 1882 the study of anterior rhinoscopy and of nasal diseases generally received great impetus from the well-known researches of Zuckerkandl on the normal and pathological anatomy of the nose and its accessory sinuses. Shortly after this date rhinology was destined to undergo what amounted practically to a revolution by the introduction of cocaine. In 1884 Jellinek published an article on its use in the throat and nose. In spite of the originally high price of the drug its employment rapidly spread in this department of surgery, not only on account of its anæsthetic properties, but also on account of its contracting power on the nasal mucous membrane. Its value in the latter respect in enabling a successful examination to be made may be fairly compared to that of atropin in examination of the eye.

While all these rapid developments were taking place with regard to the careful examination and treatment of the nasal cavities, the study of the various reflex neuroses connected with the nose, and the use and action of cocaine, a new phase of rhinology was springing up. I refer to the study of sinus diseases. Diseases of the accessory sinuses when producing gross extra-nasal lesions had been known from time immemorial and many operations had been devised for their removal. But the study of diseases of the sinuses, especially chronic empyema with only nasal symptoms, was practically a new departure and it materially enlarged the scope of rhinology. The nasal cavities as we can inspect them were beginning to be regarded as only a small portion of the nasal tract, the gateway as it were to large and important cavities the diseases of which merit careful study. In these few remarks I have attempted to point out some of the rapid strides which this speciality has made in the last 30 years and have, I hope, shown that the progress of modern rhinology is in nowise behind that of any of the other medical sciences. I feel confident that by persevering and judicious application of the general knowledge of medicine and surgery to this particular branch the efforts of its many devotees all over the world will enable it to make as rapid progress in the future as in the past."

Dr. P. LACROIX (Paris) then read a paper on a new apparatus for Inhalations, explaining its use and application in the treatment of tuberculous laryngitis. He was followed by

Dr. A. BRONNER who read a paper on the use of Formalin in Atrophic Rhinitis. In the discussion which followed Dr. BABER endorsed the remarks of Dr. Bronner in advocating a more careful examination of nose and accessory sinuses in ozena and in not regarding all such cases indiscriminately as syphilitic in origin.—Dr. JOBSON HORNE considered that formalin would be found a more efficient antiseptic than perchloride of mercury in diseases of the throat, nose, and ear, and not only in surgical proceedings, but more particularly in infectious cases, in which it is important during convalescence to prevent the patient from being a source of infection to others.—Dr. JACKSON (Pittsburg), Dr. PEGLER, Dr. W. LAMB, Dr. WATSON WILLIAMS, Dr. KIDD, and Dr. T. BOBONE (San Remo) also joined in the discussion.—Dr. BOBONE advocated the use of nitrate of silver and iodide of potassium in the form of a paste. His patients had objected to formalin on account of the pain which it occasioned.—Dr. BRONNER, in reply, stated that small quantities of formalin used in a spray gradually increased in strength for a few weeks at a time would not occasion pain. Douching he considered unnecessary and best avoided.

A paper written by Mr. RICHARD LAKE in conjunction with Mr. J. POLLARD upon a case of Exophthalmic Goitre cured by Removal of one Lobe of the Thyroid was read. Dr. WATSON WILLIAMS, Dr. TILLEY, Dr. BABER, Dr. SNOW, and Dr. PEGLER joined in the discussion.

Dr. DUNDAS GRANT read a paper on Some Forms of Laryngitis consequent on Purulent Affections of the Nose. Professor LUC (Paris) discussed the subject and Dr. GRANT replied.

Dr. LOUIS BAR (Nice) read a paper on the Diagnosis of Frontal Sinus, Empyema, and Malignant Tumours of Nasal Fossæ.

TROPICAL DISEASES.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

An interesting introductory address on the Etiology of Malarial Fever was delivered from the Presidential chair in this section by Dr. GEORGE THIN, an abstract of which we give:—

"At the last meeting of this Association," said Dr. Thin, "when the Section for Tropical Diseases was constituted, your distinguished first President was privileged to make to you the announcement of a discovery of the first importance. Major Ross, after several years' laborious work, guided by scientific instincts of a high order, and characterised by a tenacity and strength worthy to be

put in comparison with the best feats—and that is not saying little—of other eminent Scotchmen whose names are indissolubly bound up with the history of our Indian Empire, succeeded in finding the key to a problem which had long puzzled the ablest and most careful students of the etiology of malarial fevers. The coincidence of the fever season in malarial countries with the period of activity of mosquito life, the danger of exposure to night air, night being the time when mosquitoes most actively bite, had long struck observers. I find, from an admirable summary by Dr. Nuttall, published in the twenty-fifth volume of the *Centralblatt für Bakteriologie*, that the causation of malarial fever by insects was referred to by Nott in 1848 at New Orleans as something already known, whilst in 1883 Dr. King published in America an excellent exposition of the mosquito theory. This theory was again suggested by Laveran in 1891 and also by Flügge in the same year. In 1892 Pfeiffer, in a paper on the Coccidium of the Rabbit, in which he showed that this parasite is capable of two different cycles of development, one being exogenous, mentions that Koch had suggested that a similar condition might hold good for the parasite of malaria and that exogenous malarial spores might be conveyed to man through the agency of blood-sucking insects such as mosquitoes. In 1894 Dr. Manson, in his Goulstonian Lectures, brought this problem prominently before medical men in this country and urged that a mosquito theory was best calculated to explain the various conditions of the problem.

So far we have been dealing with theories, more or less suggested and justified by reasoning from recognised facts. I had hoped that we should have had the gratification of hearing from Major Ross's own lips the account of the interesting story of how, inspired and encouraged by Dr. Manson's advice and experience, he undertook the solution of the malarial problem and finally succeeded in removing what had previously been only theory to the domain of ascertained fact, but, as you know, he has left on an expedition to the West Coast of Africa to continue his researches. Whilst Major Ross was working in Calcutta with proteosoma the probable connexion between mosquitoes and malaria was being studied from another side by the distinguished Italian naturalist Grassi. During the summer of 1898 he made an exhaustive study of the mosquitoes that prevail in different parts of Italy and he found that there were many places where culex pipiens, the predominating mosquito, was common, but in which there was no indigenous malaria, whilst in places where malaria occurs he found a large mosquito called by zoologists anopheles claviger. This species, characterised by four spots on the wings arranged like a capital T, may, he says, be defined as the true tale-bearer of the presence of malaria. He has mentioned a number of malarial places in Italy in which this holds good and he refers to malarial zones existing in the midst of non-malarial districts. In these zones he found anopheles claviger, but in the surrounding free zones the mosquitoes were of other genera. At one part where he found tertian ague very prevalent he found this mosquito enormously diffused and he associated it with the fever. He finally came to the conclusion that in connexion with malaria in Italy all mosquitoes may be excluded except three species, the characteristic marks and habits of which he has described at length. Anopheles claviger, to which fever could be most clearly traced, bites sometimes during the day and night, but mostly half an hour before and half an hour after sunset. Such was the condition of our knowledge of this subject when Bignami first succeeded in getting positive results in 1898. Bignami and Bastianelli have now conclusively shown that anopheles may be made to bite a man suffering from malarial fever and if then kept at a proper temperature (30° C.) for the requisite number of days to allow the sporozoites to be present in the salivary glands and then made to bite a healthy man who is free from malarial fever this man will, after the regular incubation period, develop malaria, and it is important to note that the parasite so conveyed from man to man through the mosquito retains its specific type. If the source of supply gives in the first instance crescents the mosquito conveys to the healthy man the corresponding fever of the summer-autumn type. The same observers have also shown by microscopical examination that in the different stages of development in the body of the mosquito the crescents and tertians parasites retain their distinguishing characteristics. It further results from their experiments that a very few bites are sufficient to convey fever—probably a single one sufficing. What is important is the species of mosquito and the stage of development of the parasite in its body. They infer that in the course of the winter the parasites in anopheles die out and that infection is conveyed in the spring by the insects biting persons who suffer from relapses of fever from the previous season and then biting healthy persons after the sporozoites have developed.

It will be seen from what I have related of the experiments of the Italian observers that the habits of anopheles claviger are matters of enormous importance to the human race and it is interesting to know that these insects pass the winter in human habitations and that during this period their habits of migration are so much in abeyance that although the anopheles in the dwelling-houses are found charged with human blood and contain the hæmatozoa of malaria those in the adjoining stables and hen-houses do not contain the parasite. The geographical distribution of anopheles is also a matter of importance. The anopheles claviger is widely diffused in Europe. It occurs in Scandinavia, Austria, Germany, Russia, Italy, and the adjacent islands, and both anopheles bifurcatus and anopheles claviger were described in 1825 by Stephens as existing in England. It would be interesting to know what are its limits of distribution in England at the present time and whether it can be found in districts in which malarial fevers still occasionally occur.

The same year that has seen the momentous discovery of the intermediate host of the parasite of human malaria has seen the establishment of schools for tropical medicine in Great Britain of which the interest and importance will, I hope, not be confined to these islands. The material requisite for the study of tropical diseases has long been present in this country and there has never been a time when it was not important to use this material for clinical instruction. It has been long utilised for the training of army surgeons, but no sufficient systematised instruction was provided for civilian medical men destined to practise in the tropics. Dr. Manson called attention to this deficiency with convincing force and Mr. Chamberlain, bringing to the subject the clear perception and decision for which he is distinguished, took a step which at once brought the subject prominently before not only the profession but the people of England. Now that so much has been done to further the study of tropical medicine in this country within one short year we wonder why it was never done before. That this movement will not only be sustained but that its scope will be largely increased seems to me a matter of certainty. The imperial idea, which has now got a firm hold of so many people in this country, means such an expenditure of life and health in tropical countries that it is a question whether the population of these islands is able to bear it. It is all the more necessary therefore that we should be able to provide for these countries a supply of thoroughly trained medical men. Two schools have in the meantime been established, one in London at the Seamen's Hospital, and another at Liverpool, and we may confidently expect excellent work from both. But if we take into account the number of patients suffering from tropical diseases and the consequent opportunities for clinical study the great military hospital at Netley stands out prominently as offering conspicuous advantages with which London and Liverpool cannot compare. The large and swift transports that are employed by Her Majesty's Government bring regularly sick soldiers—from India particularly—to Netley Hospital and the number brought is so great as to render the opportunities for teaching tropical diseases at Netley unique. Not only can no institution in this country be compared with Netley as a school for tropical medicine, but no other possible school in Europe could be compared to it. It is sufficient to mention that the teaching of pathology is in the hands of Professor Wright to know that that branch of medical instruction is in the hands of a master of modern scientific methods. That a school with the advantages of Netley should have been confined to army surgeons in a country whose connexion with the tropics is so close as ours would be a subject of astonishment if we did not consider the manner in which education has hitherto been managed in this country. Private enterprise has always to a large extent taken the place of Government regulation. That private enterprise by quickening competition, and by a process of survival of the fittest, has its merits and has (as regards general medical education) done well, cannot be doubted, but there are occasions in which private enterprise does not find its scope because it is limited and cramped by service regulations and *esprit de corps*. It is

hardly possible that if the advantages of Netley as a school for tropical medicine had been brought before the notice of the Government they would have refused to open its wards and its class-rooms to civilians who intended to practise medicine in the tropics. Not only would no Government have taken the responsibility of refusing such a request, but if the facts of the case had been sufficiently made known I believe there is enough statesmanlike initiative in Government circles to have led to spontaneous action on their part. Probably in no other European country would such opportunities be overlooked. The time which most young medical men can give to acquiring special professional knowledge after they have qualified in medicine is necessarily limited. It is of great importance, therefore, that as many cases as possible should be utilised in their teaching. Although for the purposes of scientific investigation a few cases may be sufficient and the scientific work of a school may be not only not in proportion to the number of patients but may conceivably be in an inverse ratio with the clinical instruction which is the main object of a school for tropical medicine it is quite different. From the time the young practitioner arrives in the tropics he will in most cases be left to work unguided. Clinical knowledge does not come by intuition and cannot be got from lectures and theoretical teaching. It is of the utmost consequence, therefore, that the young practitioner preparing for the tropics should see as many cases as possible within the short time that he can devote to their study.

[Here Dr. Thin showed diagrams comparing Netley with London and Liverpool in respect to the number of patients available for instruction and continued:—]

"At Netley the practitioner would see 20 times more cases of hepatic abscess and of hepatitis than at Greenwich and at Liverpool he would probably see few or none. The distribution of these diseases at the different schools is due to the sources from which they draw their patients and is inseparable from circumstances over which the schools themselves have no control. If we look at the figures given in the reports it is evident that while Liverpool and Netley afford excellent schools for the study of malarial fevers and that at Greenwich there is clearly a sufficient number of cases to enable the main features of the diseases to be studied, for the study of dysentery Netley and Greenwich afford the only available supplies, while the material at Netley far outnumbers that at Greenwich; and when we come to the most important diseases, hepatic abscess and hepatitis, in which clinical instruction is of so much importance, Netley appears to be the only school in this country in which adequate instruction can be given. The prevalence of these diseases amongst the civilian population in the tropics, the mortality and ill-health which they cause, and the frequent difficulty of diagnosis and treatment render it a matter of the greatest consequence that medical men who are called on to deal with them should have instruction in a large hospital where there are groups of cases, and as Netley appears to be the only school in this country in which sufficient material for the study of hepatic abscess and hepatitis occurs, a course there ought to be considered indispensable to every medical man who wishes or is obliged to thoroughly equip himself for tropical practice. As regards beri-beri, Greenwich and Liverpool afford nearly exclusive facilities, the reason being that it is a disease which is founded almost entirely amongst natives. For the study of Mediterranean or undulatory fever the only available hospitals in this country appear to be Netley and Haslar, both hospitals being supplied by soldiers and sailors from Malta and the Mediterranean, Greenwich and Liverpool offering no facilities for the study of that disease. Whether the authorities could be brought to consider such a startling proposal as opening a military hospital to civilian practitioners I do not know. Innovations of this kind are too apt to be met with a *non possumus*, and certainly there is no precedent; but it is difficult to believe that an application for permission on behalf of medical men appointed or to be appointed to the Colonial Service would be met by a refusal. Although the administration of a country renders departments indispensable, these departments, after all, have only to recognise one principle—the good of the governed. On this principle it is difficult to understand how the Government should refuse to open Netley to the Colonial Service. Indeed, I cannot see that any important objection could be made to opening the teaching to all qualified medical men, but for a beginning it would perhaps be prudent to press first of all the claims of medical men qualified for the appointments given by the Colonial Office and of a selected number of private practitioners whose sphere of work is in the tropics. The opening of Netley to civilians for instruction in tropical diseases would soon be accomplished if the perspicacity, breadth of view, and decision shown by Mr. Chamberlain in the case of the London school were again brought into action. This great hospital, so long as the unfortunate supply of sick soldiers continues, is fitted to become a centre of clinical instruction in tropical diseases not only for England but for Europe. With the multiplication of medical schools for tropical medicine there ought to come the principle of the selection of candidates for the Colonial Service and other similar appointments on their merits. Although much has been said, and much can be said, against competitive examination for appointments, nothing else has been suggested that is not open to greater objection, and, everything considered, it is the method that is most likely to secure the best men."

Dr. THIN at the conclusion of his paper put his views with regard to Netley Hospital to the Section in the form of a motion that the hospital should be open to civilians, but an amendment to the contrary effect, proposed by Dr. P. MANSON and seconded by Dr. A. TURNBULL, Inspector-General of the Navy, was carried.

Dr. GEORGE F. H. NUTTALL, of the Cambridge Pathological Laboratory, then read an interesting paper on the Agency of Insects in Spreading Disease. After pointing out that this agency of insects had only aroused real interest recently, he said that in the spread of bacterial disease insects played either an active or a passive rôle. Active results, as gauged by experimental evidence, were proved to be almost *nil*, but the passive rôle played by insects as carriers of pathogenic organisms was an important one. House flies, beetles, ants, and pediculi were all held to be distributors of bacteria. The spread of much disease was ascribed to their agency—for example, plague, cholera, anthrax, framboesia, and various forms of ophthalmia. Flies by the nature of their food carried bacteria about in their bodies or within their alimentary tract and deposited them on the food or on lesions of the mucous membranes or skin. Insects also aided in the spread of diseases due to animal parasites. In this they played both an active and a passive part. Texas fever and malaria were inoculated by the proboscis of the parasite into the host or they were devoured by a host of the parasite they contain. Grassi (1885) made experiments on flies showing that they might transport the eggs of tænia solium and trichocephalus; and Stiles saw the eggs of ascaris lumbricoides undergo developmental changes in flies raised from maggots fed with the eggs of the parasites during warm weather.

Mr. C. P. CHILDE read a paper on a case of Bilharzia Hæmatobia with specimens. Mr. Childe's patient, a young girl, was believed to have contracted the disease whilst bathing in a pool of fresh water. Dr. MANSON refuted the idea of infection being possible by the skin. Lieutenant-Colonel MACLEOD stated that this parasite cannot be destroyed in the body by any known drug, but that people the subject of bilharzia can attain a ripe age.

Dr. PATRICK MANSON, medical officer to the Colonial Office, contributed a paper on Filarial Periodicity in which he stated that from the results of a post-mortem examination held in February, 1897, he was able to ascertain where the filarial embryo sheltered during the hours when it was absent from the peripheral circulation. Shortly, it would seem that it was in the blood of the lungs and great vessels at the root of the neck and in the vessels at the base of the heart that the embryo resided. As to how the parasites retained their position in, say, the blood-stream of the aorta Dr. Manson could offer no explanation but suggested that it might be due to the existence of some physiological product the outcome of the activity of the waking hours of filarial life which either drove filaria nocturna from the surface of the body during the day, or attracted it to certain internal organs during the night.

THE ANNUAL MUSEUM.

Although there was a plenitude of exhibits to interest the practitioner yet the facilities conducive to his comfort and convenience of inspection were not so good as were offered in Edinburgh last year; indeed, the museum held in the Drill-hall in Grigg-street, Portsmouth,

was not so attractively arranged; and though the space allotted afforded ample room yet it was not artistically apportioned. Each exhibitor occupied what seemed to be an exact square or rectangle and the rows up and down were somewhat narrow and intersected at exact right angles by the rows across. There was a dead level of artistic attainment in the stalls themselves and the level was not very high. The exhibitors seem to have devoted themselves more to placing as many goods as they could in the space allocated to them rather than to placing them in artistic fashion. In this respect the exhibition at Portsmouth compared decidedly unfavourably with the excellent and artistically arranged exhibition in Edinburgh last year. There was, however, no lack of objects; these were as numerous and varied as usual, but more relief seems wanting which should take the form of some scientific objects to remove the impression of the exhibit being a mere means of bringing drugs and foods to the notice of the profession and of pushing new chemical and medicinal wares. Despite the great heat which prevailed the attendance of visitors was good throughout, and it required considerable perseverance to see and discuss all that was shown with the thermometer over 80° F. and the sun's rays accentuated by the glass roof which was very imperfectly protected by canvas awnings. Whatever the peculiar drawbacks and difficulties may be under which this annual record or demonstration of the year's advances in pharmacy, surgical appliances, and dietetics is held, it never fails to attract an audience, affording, as it does, the busy practitioner some interesting information and placing in his way, perhaps, some useful hints and facts which may lighten the burden of his medical work.

On this account we have always deemed it useful to describe the more important exhibits at some length and on this occasion, as on previous occasions, we propose to classify for the sake of convenient reference the exhibits under the following heads—viz.: I., Drugs; II., Foods and Food Products; III., Sanitary Appliances, Disinfectants, &c.; IV., Surgical Instruments and Appliances; V., Mineral Waters, Beverages, &c.; VI., Publications; and VII., Miscellaneous.

I. DRUGS.

Steady advance appears to have been made not only in the exhibitive form of medicaments but also in the direction of their purity and elegance of composition, while, needless to say, the past year has witnessed the introduction of a great number of new remedies and of useful and valuable combinations, most of which we have already brought to the notice of our readers in our columns under the heading of Analytical Records from THE LANCET Laboratory. Pharmaceutical progress, more especially directed to the administrative forms of medicament, has been very remarkable during recent years and it has attained such a position as to have very materially aided the practitioner not only to attain accuracy of dosage but also to be sure of the purity of the drug and of its therapeutic effects. Attention has, for example, been very abundantly paid to the toleration of drugs and to the avoiding of effects which are undesirable. Modification of the salicylates and the introduction of new morphine derivatives occur as single examples. In these matters it is satisfactory to find that the pharmacist is guided by the medical man and not solely by a knowledge of the chemistry of the principles concerned. In the present exhibition new remedies and combinations were to be found on all sides which it was stated were the outcome of clinical experience. Synthetic remedies seemed to be on the decline or at any rate those coal-tar crystalline products which have almost deluged the market as quinine substitutes, being offered from time to time as analgesics, anodynes, antipyretics, as the case may be. A greater variety of new drugs than was comprised in the long list at Mr. Martindale's exhibit (10, New Cavendish-street, London, W.) could hardly be. Here were some well-known, useful, and effective preparations. We may mention orthoform or its hydrochloride which has comparatively recently been employed with excellent results in the rôle of a local anæsthetic and is especially useful for the alleviation of the pain of burns. Again, the new morphine derivatives, heroine, dionine, and peronine, are recommended as having safer and more satisfactory sedative and analgesic properties than has morphine or codeine, especially in bronchial affections. This exhibit also included some special nasal and urethral bougies and also glass capsules containing specific amounts of amyl nitrite, chloroform, ethyl bromide, iodide, and isobutyl nitrite. Messrs. Allen and Hanburys (Plough-court, Lombard-street, London, E.C.), had two stalls in the museum—one devoted to drugs and special foods and the other to surgical appliances and x-ray photography. The latter we shall deal with under Section III. The chief features of the former stall were the valuable malt and oil preparations. Bynin is the name of a powerfully active diastasic fluid malt extract and with this is combined the "Perfected" cod-liver oil, forming a uniform and palatable mixture contained in wide-mouthed lever-sealed jars. Other excellent preparations are byno-hypophosphites, byno-phosphates, byno-cascara, byno-pancreatin, and pepsin, the formula of each of which is obvious from the compound named. The stall was well arranged, the bottles of pure specimens in bulk being relieved by collections of soluble gelatin-coated pills, hypoderms, tablets of "Allenburys" medical and toilet soaps, preparations of animal extracts and "kapsols," new soft pills consisting of a medicament or combination of medicaments enclosed in a thin jujube coating. Kapsols are plastic and readily dissolve in the alimentary tract. A large assortment of elegant pharmaceutical preparations was presented to view on the stall of Messrs. Parke, Davis, and Co. (21, North Audley-street, London, W.). Amongst those specially demanding notice was the series of elixirs including cascara sagrada and senna, both, while satisfactorily active, being pleasant to the taste. A novelty shown here, too, consisted of the globules of saw palmetto and santal oils, a combination which has proved useful in the treatment of congested and irritable conditions of the genito-urinary tract. Amongst excellent tonic preparations should be mentioned specially the solution of iron peptonate and manganese which presents the iron and manganese in an easily assimilable condition according to clinical experience. The exhibit included also serums and toxins, euthymol preparations (euthymol is a pleasant and effective fluid antiseptic) and nuclein solution, which is described as a non-poisonous blood germicide for oral and hypodermic administration, which stimulates the nuclein-forming tissues of the body and is used with good results in tuberculous diseases and in general in debilitated conditions. As an example of local pharmacy should be mentioned the up-to-date specimens and preparations of the Timothy White Co. (23, Chandos-street, Portsmouth). These included a great many standard preparations of the Pharmacopœia which reflect credit on this firm. A further excellent example of provincial pharmacy was adequately illustrated in the exhibit of Messrs. Wyleys, Limited (Coventry), which comprised some admirable exhibitive forms of medicaments, standard liquors, gelatin pills, besides calf lymph tubes. Worthy of mention, also, is neuracetin, described as an antipyretic, analgesic, anti-neuralgic, and anodyne. It is said to be free from unpleasant after-effects commonly associated with the "synthetics" especially when exhibited alone. Chinosol continues to be in favour as an antiseptic and disinfectant. It has recently been described in our columns as having given favourable results in checking the advance of phthisical disease. It may be obtained (B. Kühn, 36, St. Mary-at-Hill, Eastcheap, London, E.C.) in various forms—as, for example, as tablet, in soap, ointment, &c. The same exhibitor showed an interesting series of other comparatively new preparations—as, for example, argentol—a compound of silver and chinosol, easily breaking up under the influence of septic organisms into oxyquinoline and silver, and useful as a dusting powder for suppurating surfaces; lenigallol, a non-irritating preparation of pyrogallol in the form of powder and said to be useful in eczema; eurobin or chrysarobin acetate, not staining to the same extent as chrysarobin and of benefit in recent psoriasis, and a useful non-irritant application to the scalp and not staining the hair; eugallol, an active pyrogallol for psoriasis; and iodoformogen, a compound of iodoform and albumin suggested as an advantageous substitute for iodoform. Excellent types of modern pharmacy and new galenical preparations were exhibited at the stall of Messrs. Newbery and Son (1 and 3, King Edward-street, London). Amongst these may be mentioned a fluid extract of cascara sagrada prepared in such a way as to eliminate all nauseous and irritating properties, granular effervescent salts, coated pills, and hypodermic lentiforms. A comparatively new tonic which seems to merit more extended trial is the tono sumbul cordial made by this firm; it is said to be specially indicated in depressed nervous conditions. Most of the

interesting series of preparations exhibited by the Bayer Co., Limited (19, St. Dunstan's-hill, London, E.C.), have already been brought to the notice of our readers through our analytical columns. On the present occasion these included aspirin (quite recently introduced), a new substitute for salicylic acid; heroin, a substitute for codeine in respiratory trouble; and creosotal, duotal, and protargol, a new silver preparation, said to be an excellent antiseptic application in gonorrhœa and ophthalmia. This exhibit further included preparations of somatose as iron-somatose and milk-somatose, somatose itself consisting (as we have shown) largely of the digestive product of meat—viz., the powerful nutrient albumose but little peptone. Scott's Emulsion (Scott and Bowne, Limited, 95, 96, 97, and 98, Great Saffron-hill, London, E.C.) has been minutely examined in THE LANCET Laboratory with satisfactory results. Its composition is based on an excellent formula, while its admirable physical condition, that of a perfectly uniform emulsion, justifies the belief that it serves as a powerful nutrient and tonic, and practical experience lends abundant confirmation to this view. In a similar way Hommel's hæmatogen gave excellent results on submitting the preparation to analysis in THE LANCET Laboratory. Proof was furnished of the statement that it contains pure hæmoglobin, the salts of the blood, the albuminous constituents of the serum. The fluid is perfectly stable and contains glycerine and is by no means unpleasant to take even when exhibited to children. Clinical evidence is strongly in its favour as a very decided blood tonic and experiments are recorded showing how marked the increase of red corpuscles is in the blood of patients suffering from anæmia, chlorosis, and other debilitated conditions who have taken the preparation systematically. Hommel's hæmatogen is being introduced into this country by Messrs. Nicolay and Co. (38 and 38A, St. Andrew's-hill, Doctors' Commons, London, E.C.). There were some interesting specimens and preparations on the stall of Messrs. A. and M. Zimmermann (9 and 10, St. Mary-at-Hill, London, E.C.). Amongst these were the non-irritating silver and germicidal salt argentamine; beta-eucaine, a local anæsthetic less toxic than cocaine and for that excellent reason preferable; and sanose, a compound of albumose and casein, and therefore a powerful and easily assimilable nutrient. Included in this exhibit were some preparations of Messrs. Kalle and Co., such, for example, as orexin, described as a tasteless stomachic and already analytically discussed in our columns, while the Naftalan Gesellschaft, Magdeburg, exhibited Naftalan, also described recently in our analytical columns as a peculiar raw naphtha which is said to be effectual in the treatment of eczema, burns, and other external inflammatory conditions. At the same stall of Messrs. Zimmermann and Co. were to be seen some interesting specimens from the Actien-Gesellschaft für Anilin-Fabrikation, Berlin, comprising tancocol or tannate of gelatin, exercising astringent properties in the intestinal canal; resorbin, a new ointment basis rapidly absorbed by the skin; enastin, which augments the solid and liquid constituents of the bile; and lastly, chemically pure spermin prepared and purified according to the method of Professor Poehl. Messrs. Burgoyne, Burbidges, and Co.'s (16, Coleman-street, London, E.C.) excellently comprehensive exhibit was not without novelties of general interest to the profession. Amongst these, for example, were the interesting products of the Chemische Fabrik von Heyden, Radebeul, W. Dresden. Collargolum, for example, which has recently been tested in THE LANCET Laboratory, is described as soluble metallic silver which when introduced into the system by inunction of the ointment, hypodermically, or by the mouth gives excellent effect in the treatment of the septic complications of lymphangitis, phlegmon, erysipelas, anthrax, &c. Again, hyrgolum, which is described as water-soluble metallic mercury, has also been examined in THE LANCET Laboratory. In the form of ointment it may be used, it is said, in all cases where mercury is indicated without producing inflammation of the skin or mercurial eczema. According to our experiments it contains ammonia. Acoin, specimens of which were shown by the same firm, has already been described as a new local anæsthetic suitable for infiltration-anæsthesia, like cocain, but with no toxic effect. "Nährstoff" Heyden was also exhibited at this stall and appears to be a pure proteid soluble in water and not coagulated on boiling. It serves as an excellent nitrogenous adjuvant food. Zeroform, which we have already alluded to in our analytical columns, is a subgallate and phenate of bismuth—a yellow powder resembling iodoform for which it may be substituted with distinct advantages. Amongst the notable specialities on the well-arranged exhibit of Messrs. Mackey, Mackey, and Co. (175, Grange-road, Bermondsey) was the mistura-bismutho compound, which is an excellent formula for the treatment of dyspeptic troubles. It is a compound of bismuth with chloroform, prussic acid, nux vomica, and aromatics, and is miscible with water. It is skilfully prepared and reliable. The exhibit also included gelatum eucalypti, which is a non-fatty jelly containing specially refined eucalyptus oil and is useful in respiratory diseases; glyceroles or glycerine tinctures in which the remarkable solvent properties of glycerine are made signal use of; and liquor santal cum copaibâ, cubebâ, et buchu, a preparation that is miscible in water. Messrs. C. J. Hewlett and Son (35 to 42, Charlotte-street, London, E.C.) had a very diverse selection of fine pharmaceutical preparations which afforded an excellent illustration of the advances made in pharmaceutical art and skill. The exhibit included certain misturæ of approved design and formula, antiseptic preparations, jellies, and pellets, and some new drugs said to be valuable in diarrhœa and dysentery. Sanochinol was the feature in the exhibit of the Pharmacie Internationale (A. Koch, Hamburg). This substance is obtained by treating quinine with nascent oxygen; the new compound differs from quinine in regard to chemical properties but appears to be a powerful specific in malaria while without the unpleasant "side effects" of quinine. At the same stall specimens of the now well-known Wiesbaden gout water were shown. It contains chiefly sodium bicarbonate and chloride and only traces of lime salts, according to our own analysis. Several drugs which have recently been introduced to the notice of the profession and reported on in our columns were exhibited on the stall of Messrs. Thomas Christy and Co. (25, Lime-street, London, E.C.). Amongst these may be mentioned the organic fluorine preparations, fluor-rheumin for rheumatism, epidermin for skin diseases, and antitussin for whooping-cough. The iodalbacid and chloralbacid compounds, which are excellent for exhibiting iodine and bromine respectively and which were specially noticed in our account of the exhibition at Edinburgh last year, may now be procured through this firm. Lastly, Messrs. Kutnow and Co., Limited (41, Farringdon-road, London, E.C.), devoted most of their space to an improved effervescent Carlsbad powder which is stated to be prepared with special care so as to be a gentle and yet effectual aperient and as far as possible free from nauseous taste. In addition, specimens of anti-asthmatic powder and cigarettes were offered for trial. The powder consists of a leaf impregnated with nitrate of potash to assist its combustion. The fumes resulting on ignition are said to give relief in asthma and to be without injurious effect.

Medical News.

VICTORIA UNIVERSITY.—At the examinations in the Faculty of Medicine held in July the following candidates were successful in the subjects indicated:—

FIRST EXAMINATION.

Part II., Biology.—R. A. H. Atkinson, John Battersby, B. M. Bennett, and A. N. Benson, Owens; J. A. Bligh, University; F. L. Boag, Alexander Boothroyd, and William Botham, Owens; Alan Boyle and W. R. Brierley, Yorkshire; Howard Buck, Archibald Cambell, and Laurence Clay, Owens; Richard Coates and Reginald Collier, Yorkshire; Thomas Coogan, Owens; Edward Cundall, Yorkshire; Francis da Cunha, J. B. Dalton, W. B. Dougan, J. L. Falconer, J. P. Garlick, and P. C. Garrett, Owens; R. A. Gibson and R. S. H. Gill, University; Tom Glover, J. W. Hartley, Robert Haslam, and H. D. Haworth, Owens; S. L. Heald, Yorkshire; Arthur Hendry and W. E. Hewitt, University; H. B. Holmes, A. W. Houghton, and F. C. Hudson, Owens; C. A. Hughes, H. R. Hurter, and Lancelot Hutchinson, University; F. G. P. Ilderton and J. M. H. Jones, Owens; G. H. Joseph, University; W. H. Judson, Owens; Walter Longley, Yorkshire; T. W. Lonsdale, Owens; H. J. Macvean, Yorkshire; W. Y. Martin and J. de V. Mather, Owens; W. F. Mitchell and R. H. Mole, University; Stuart Murray, Owens; L. D. Napier, University; C. S. O'Neill, R. N. Porter, and W. B. Ramsden, Owens; E. W. Reed, Yorkshire; Frank Robinson and G. H. H. Russell, Owens; F. H. Salisbury, University; W. G. Scott, Yorkshire; Harold Simms, R. T. Slinger, James Smalley, and J. C. Symth, Owens; J. W. Sowerbutts, Yorkshire; H. B. Spurway, R. H. Swindells, F. P. S. Thomas, A. M. Walker, T. W. Walker, Douglas Wardleworth, S. H. West, and H. V. White, Owens; W. F. J. Whitley, Yorkshire; E. M. Wilkins, Owens; Henry Woods, University; and William Wright, Owens.

SECOND EXAMINATION.

A., Anatomy and Physiology.—D. M. Alexander, University; E. M. Ashcroft and S. B. Brentnall, Owens; R. N. Butterworth, Yorkshire; Alexander Cran, Owens; S. W. Davies, University; F. S. Fletcher, F. W. Gatenby, Godfrey Heathcote, and James Hindshaw, Owens; B. H. Hirst, Yorkshire; A. G. Jackson, University; H. L. Jenkins and S. J. C. Johnson, Owens; E. W. Kemp, Yorkshire; C. P. Lapage and H. F. Lee, Owens; W. G. Lloyd, University; S. B. Mehta, Owens; Sydney Platts, Yorkshire; H. H. Rayner, C. R. Ricketts, and F. M. Rodgers, Owens; and J. C. Teasdale, Yorkshire.

B., Materia Medica and Pharmacy.—J. W. Anderton, Owens; Roy Appleton, P. W. Ashmore, and L. R. Braithwaite, Yorkshire; Walter Briggs and G. H. Brown, Owens; James Wm. H. Brown, Yorkshire; Stanley Brown, University; Thomas Brown and Alexander Buckhard, Yorkshire; A. G. Christian, Robert Cook, and W. E. Cooke, University; E. H. Cox, Owens; Harold Crawley, Yorkshire; J. A. Davenport, Owens; R. T. Dobson, University; A. J. Edmonds, F. S. Fletcher, W. P. Grant, J. W. Greenwood, and A. H. Gregson, Owens; H. E. Heapy, University; G. R. Hitchin, Alexander Hodgkinson, C. H. Hopwood, Arthur Howard, J. R. Hutchinson, H. L. Jenkins, and A. E. Johnson, Owens; J. A. Johnson, University; J. A. Jones, Owens; R. J. Jones, G. W. N. Joseph, and R. E. Knowles, University; F. H. Lacey, Owens; R. J. M. Ladell, Yorkshire; A. W. Latham and G. H. Leigh, Owens; J. A. Longley and Harry Maffin, Yorkshire; H. E. Moore and J. H. Part, Owens; A. H. Radcliffe, Yorkshire; J. A. C. Roy and F. W. Schofield, Owens; Robert Smailes and P. K. Steele, Yorkshire; F. E. Tylecote, David Walker, T. B. Wolstenholme, and M. S. Wood, Owens; H. F. Woolfenden, University; and W. S. Wrigley, Owens.

FINAL EXAMINATION.

Part I.—Arthur Anderson, J. T. Bailey, W. E. Bramber, and A. D. Beckett, Owens; Philip Benington, University; A. T. Blease, Owens; W. H. Broad, Robert Burnet, and P. I. Caddow, University; A. C. Clarke, E. R. Cooper, Daniel Cowin, and C. W. Crawshaw, Owens; J. L. Dimond, University; D. J. Ferris and F. H. Flack, Owens; A. H. B. Fletcher, Yorkshire; Walter Garstang, Reginald Gordon, F. G. Hack, C. R. Hall, W. D. Hamer, Henry Holt, and E. C. Hulme, Owens; A. R. Jackson and L. C. Johnson, University; W. C. Johnson, Reginald Lawrence, and C. H. Lee, Owens; H. C. Ling, Yorkshire; S. F. Linton, University; H. S. Lister and H. S. McLellan, Owens; Edgar Newbouse, Yorkshire; William Parker, Owens; A. S. Parkinson, Yorkshire; Albert Ramsbottom, Owens; E. C. Roberts, University; C. W. S. Saberton, W. R. N. Smithard, J. H. Stephens, R. N. West, H. W. Whiteley, G. M. Y. Whittingham, Owens; C. R. Willans, Yorkshire; and T. B. Williams, P. G. Williamson, and W. A. B. Young, Owens.

Part II.—G. P. Alderson, University; W. J. W. Anderson, Yorkshire; P. A. Browne, University; H. R. Clarke, †Walter Crabtree, and E. C. Dutton, Owens; R. J. Ewart, University; †E. W. Falconer, Owens; C. H. Ferguson and †H. M. Fletcher, University; Charles Garner, Owens; Joseph Goodall, Yorkshire; Archer Greenwood, Owens; C. H. Greenwood, Yorkshire; †I. W. Hall and Rowland Hamer, Owens; †H. C. R. Hime, Yorkshire; J. C. Hindley, Owens; C. B. Horsfall, Yorkshire; J. A. Howard, University; †W. A. Illingworth and F. W. Johnson, Yorkshire; L. R. Lempriere, Owens; Hugh Lett, Yorkshire; R. J. Martin, Owens; J. W. Miller, University; *Joseph Moreton, Owens; †Armitage Morton, Yorkshire; R. A. Needham, Harry Osborne, and †A. E. Rayner, Owens; J. E. H. Scott, Yorkshire; C. E. Silvester, †Harold Snape, and W. H. Tattersall, Owens; T. J. Thomas, University; William Thompson, Owens; Harry West and L. S. Whitwam, University; and D. O. Williams, Yorkshire.

* Awarded first-class honours. † Awarded second-class honours.

Ordinary Degree of B.Sc.: Intermediate Examination.—Lilian B. Auld, University; J. K. S. Dixon, Mary B. Hield, and A. R. U. Hummel, Yorkshire; Alexander Rule, University; and Edith U. Sowerbutts, Yorkshire.

Diploma in Public Health.—Harold Coates, J. L. B. Dixon, and Herbert Ramsden.

UNIVERSITY OF EDINBURGH.—The following degrees were conferred on July 29th:—

Degree of Doctor of Medicine.—‡Noel Dean Bardswell, England, M.B., C.M.; *Robert William Beesley, England, M.B., C.M.; ‡Percy Hamilton Boyden, England, M.B., C.M. (*in absentiâ*); ‡Thomas Lawrie Brander, Scotland, M.B., C.M.; Robert Warden Briggs, England, M.B., C.M.; ‡Nathaniel Caine, England, M.B., C.M.; ‡William Johnson Calder, Jamaica, M.B., C.M. (*in absentiâ*); ‡Thomas Marshall Callender, Scotland, M.B., C.M.; †Samuel William Carruthers, England, M.B., C.M.; ‡John Mandall Coates, Scotland, M.B., C.M.; ‡Robert Pitcairn Cockburn, Scotland, M.B., C.M.; ‡John Hamilton Crawford, Australia, M.B., C.M.; Andrew Croll, Scotland, M.B., C.M.; *Dina Nath Prithu Datta, India, M.B., C.M. (*in absentiâ*); Edward Percival Dickin, England, M.B., C.M.; ‡Joseph Dominic Doherty, Australia, M.B., C.M.; ‡John Adamson Honey Duncan, Scotland, M.B., C.M.; ‡William John Adams Erskine, Scotland, M.B., C.M.; William Evans, England, M.B., C.M.; Ahmed Fahmy, Egypt, M.B., C.M.; †John Forbes, Scotland M.A., B.Sc., M.B., C.M. (*in absentiâ*); †James Stewart Fowler, Scotland, M.B., C.M.; †William Herbert Goldie, New Zealand, M.B., C.M.; Robert Gordon, Ireland, M.B., C.M.; ‡William Baxter Gow, Scotland, M.B., C.M.; ‡David James Graham, Scotland, M.B., C.M.; James Harvey, Scotland, M.B., C.M.; ‡Francis Henry Hawkins, England, M.B., C.M.; James Milne Hermon, Scotland, M.B., C.M.; *Percy Theodore Herring, England, M.B., C.M.; †Matthew Little Hewat, South Africa, M.B., C.M.; ‡John Howard-Jones, Wales, D.Sc., M.B., C.M.; John Vernon Hulme, England, M.B., C.M.; †David Mount Hutton, England, B.Sc., M.B., C.M.; Thomas Henry Jones, England, M.B., C.M.; †Carel Hendrik Kruger, South Africa, M.B., C.M.; Alexander Ernest George Langschmidt, Cape Colony, M.B., C.M. (*in absentiâ*); Oswald Richard Lewis, England, M.B., C.M.; ‡George Henry List, Scotland, M.B., C.M.; *Jessie Maclaren Macgregor, Scotland, M.B., C.M.; John Macmillan, Scotland, M.B., C.M.; John Finlayson Macphail, Scotland, M.A., M.B., C.M.; †Robert Haldane Makgill, Scotland, M.B., C.M. (*in absentiâ*); *John Malcolm, Scotland, M.B., Ch.B.; Henry Banbury Mapleton, England, M.A., M.B., C.M.; Raymond Maxwell, Tasmania, M.B., C.M. (*in absentiâ*); ‡David Macbeth Moir, India, M.A., M.B., C.M.; *William John Munro, Australia, B.A., M.B., C.M.; Harold Valdemar Münster, Australia, M.B., C.M.; James Thomas Charles Nash, India, M.B., C.M.; Andrew Newall, Scotland, B.A., M.B., C.M.; ‡Lloyd John Hollis Oldmeadow, Tasmania, M.B., C.M.; Thomas Wright Parkinson, New Zealand, M.B., C.M.; ‡John Arthur Parsons, England, M.B., C.M.; ‡Robert John Paton, India, M.B., C.M.; Herbert Peck, England, M.B., C.M.; †Harry Rainy, Scotland, M.A., M.B., C.M.; Malur Srinivasa Rau, India, M.A., B.Sc., M.B., C.M. (*in absentiâ*); †William Riach, Scotland, M.B., C.M.; †William Thomas Ritchie, Scotland, M.B., C.M.; William Archibald Rutherford, England, M.B., C.M.; David Wilson, Scotland, India, M.B., C.M.; William Cecil Sharpe, England, M.B., C.M.; †Arthur Henry Havens Sinclair, Scotland, M.B., C.M.; ‡Thomas Stuart, England, M.B., C.M.; †Frederick William Sydenham, England, M.B., C.M.; John William Talent, England, M.B., C.M.; ‡Thomas James Thomson, Scotland, M.B., C.M.; Herbert Watthews, England, M.B., C.M.; †Alfred Maxwell Williamson, Scotland, B.Sc., M.B., C.M.; Robert Appleton Wilson, England, M.B., C.M.; and George Pratt Yule, Scotland, B.Sc., M.B., C.M.

* Awarded gold medal for thesis.
† Highly commended for thesis.
‡ Commended for thesis.

Degrees of Bachelor of Medicine and Master in Surgery.—John Brown, Scotland; Dunbar Bovell Berkeley Hughes, British West Indies; Elsie Maud Inglis, Scotland; David Jackson M'Adam, Scotland; Marion Balfour Marshall, Scotland; Izaak Johannes van der Merwe, Cape Colony; Arthur Lloyd Owen, Wales; Aneesa Sayba, Syria; Esther Molyneux Stuart, England; Emily Charlotte Thomson, Scotland; and Addie White, Scotland.

Degrees of Bachelor of Medicine and Bachelor of Surgery.—Ivie Aird, Scotland; John Alcindor, Trinidad; Tina M'Culloch Alexander, Scotland; William Joseph Baird, England; Charles Augustus John Albert Balck, Germany; §William John Barclay, B.A., New Zealand; Frederick Adolphus Fleming Barnardo, M.A., England; Ernest Francis Bashford, England; John Grenville Bell, Australia; Percival James Bodington, England; Herbert William Boreham, England; George Alexander Brogden, England; William John Dale Bromley, England; Edward Archer Brown, South Africa; George Herbert James Brown, India; Robert Bruce, Scotland; James Martin Buist, Scotland (*in absentiâ*); David Albert Callender, Scotland; Henry George Carlisle, England; John Cecil Carr, England; Morden Carthew, Scotland (*in absentiâ*); Lilian Mary Chesney, England; Clement Somerton Clark, England; Harold Edward Coghlan, England; Walter Julius Collinson, Guernsey; §John Dixon Comrie, M.A., B.Sc., Scotland; Bertram Joseph Courtney, England; Robert M'Lauchlan Dalziel, India; William Darling, M.A., Scotland; Sydney Letts Dawkins, Australia; Yervant Alexander Djedjizian, B.A., Turkey; ‖David Ewart, New Zealand; William Ewart, New Zealand; William Reginald Eyton-Williams, England; Robert Robertson Fasson, Scotland; Hugh Faulkner, Ireland; David Ferrier, Scotland; Ernest George Ford, England; Alexander Russell Fordyce, Scotland; ‖James John Galbraith, Scotland; Alexander Beith George, M.A., Scotland; Hamilton Andrew Hugh Gilmer, New Zealand; Bridson Kermode Goldsmith, England; John Hilston Gordon, Scotland; Thomas Beardwood Gornall, England; Francis Joseph Gray, Scotland; St. Leger Hugh Gribben, New Zealand; Alfred Hume Griffith, England; George Haddow, Scotland; Percy William Hampton, Isle of Man; Frank John Hathaway, England; George Grey Hay, Scotland; Arthur Cecil Heath, England; Patrick Hagart Henderson, Scotland; William Edward Herbert, New Zealand; Irvine Kempt Hermon, Scotland; Henry Tristram Holland, England; Arthur Marson Holmes, England; James Husband, Scotland; Alice Marion Hutchison, Scotland; ‖John Gray Jack, Scotland; Walter Timothy James, Wales; Raymundo Fernandes Jardim, British Guiana; John Jeffrey, Scotland; William James Jones, Wales; John Wishart Kerr, Scotland; David Barty King, M.A., Scotland; George Davison Laing, England; Louis Stephanus Lessing, South Africa; Thomas Hillhouse Livingstone, England; Ernest Archibald Loch, Scotland; Jean Léon Louis, Mauritius; James Lockhoff, Cape Colony; §George Lyon, Scotland; Elizabeth Greer Macdonald, India; John Macrae Macdonald, M.A., Scotland; Peter Hay MacDonald, Scotland; Philip Norman Mackay Macdonald, New Zealand; William John Morehead M'Farlan, Scotland; John M'Gregor, Scotland; ‖Robina M'Gregor, Scotland; William Murray Mackay, England; Maxwell MacKelvie, Scotland; ‖Harry Malcolm Mackenzie, Scotland (*in absentiâ*); Theodore Charles Mackenzie, Scotland; Patrick Alexander Maclagan, Scotland; Laurence Craigie Maclagan-Wedderburn, Scotland; Thomas Dick M'Laren, Scotland; George Carlisle M'Leavy, Ireland; Louis William Macpherson, Scotland; Arthur Graham Martin, Ireland; Ernest William Martin, England; James FitzGerald Martin, Ireland; Ruth Massey, England; ‖James Masson, M.A., B.Sc., Scotland; James William Mathewson, B.Sc., Scotland; Edward Turner Melhuish, New Zealand; Edward Gordon Dewar Menzies, Scotland; Frederick Norton Menzies, Wales; George Henderson Menzies, M.A., Scotland; ‖James Miller, B.Sc., Scotland; John Gunn Mitchell, Scotland; Hubert Andrew David Moore, Singapore; James Ramsay Munro, England; James Alexander Murray, B.Sc., Scotland; William Ansley Murray, B.A., South Africa; Arthur Wellesley Nankervis, Australia; Andries Christoffel Neethling, Cape Colony; Tennyson Percy Oates, Cape Colony; James Orr, Scotland; Thomas Stewart Allan Orr, Scotland; William Park, M.A., Scotland; Francis Mardon Parry, India; ‖William Moncreiff Paul, M.A., Scotland; Alexander Spalding Mackie Peebles, Scotland; Ernest John Peill, England; §Arthur Preston, England; Thomas Arthur Price, Australia; Robert Norman Priuglе, Cape Colony; Sydney Clifford Pritchard, England; James Martin Reid, Scotland; William Reid, M.A., Scotland; Charles Moir Robertson, Mexico; Alfred Arthur Robinson, Trinidad; Thomas Rogerson, Scotland; ‖Robert Morison Rowe, M.A., Scotland; Archibald Bisset Shed, Scotland; Sutherland Simpson, B.Sc., Scotland; Alan Butler Slater, England; Victor Edgar Sorspure,

Stephen Southall, England; Harry Bird Sproat, Scotland; Bernard Stracey, Scotland; William James Stuart, M.A., Scotland; William Wood Thom, Scotland; George Nathaniel William Thomas, England; John Andrew Thompson, Scotland; William George Thompson, Ireland; George Thomson, Scotland; Robert Greig Thomson, Scotland; Alexander Kirk Traill, Scotland; Robert Brown Turnbull, Scotland; Alexander Tweedie, Scotland; Charles Samuel Vartan, Palestine; Norman Dunbar Walker, England; § Charles Henry James Watson, B.A., South Africa Charles Heron Watson, M.A., Scotland; Arthur Whittome, England; Angus Whyte, Scotland; Alfred Stuart Whytock, M.A., Scotland; Hector Douglas Wilson, Australia; Andrew Hamilton Wood, Scotland; and Edward M'Killop Young, Scotland.

§ Passed with first-class honours.

‖ Passed with second-class honours.

The following Scholarships, Prizes, and Fellowships have been awarded:—Ettles Scholarship: William John Barclay. Beaney Prize in Anatomy and Surgery: Arthur Preston. Syme Surgical Fellowship: Carel Hendrik Kruger. Goodsir Memorial Fellowship: Percy Theodore Herring. Mouat Scholarship in Practice of Physic: John Jeffrey. Murchison Memorial Scholarship in Clinical Medicine: Alfred Charles Sandstein. Gunning Victoria Jubilee Prize in Zoology: James Peter Hill. Gunning Victoria Jubilee Prize in Pathology: William Thomas Ritchie. Pattison Prize in Clinical Surgery: Ernest Francis Bashford and Hubert Dunbar Shepherd (equal). Buchanan Scholarship in Gynæcology: William John Barclay. James Scott Scholarship in Midwifery: Frederick Adolphus Fleming Barnardo. The Cameron Prize in Therapeutics has been awarded to Major David Bruce, R.A.M.C., M.B., C.M. Edin., for his discoveries of the cause of Malta Fever and of the Tsetse Disease and the great value of these discoveries in their prevention and treatment.

Degree of Bachelor of Science (In the Department of Public Health).—James Wilson M'Intosh, M.B., C.M.; John M'Naughton, M.B., C.M., and Edward Roberts Weir, M.B., Ch.B.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the Scottish Conjoint Medical Board held in Glasgow the following candidates passed the respective examinations:—

First Examination (Five Years' Course).—Katharine Mary Chapman, Shropshire (with distinction); Archibald Monteath Laurie, Glasgow (with distinction); James Robert Robertson, Glasgow; Alexander Glen, Kilsyth (with distinction); William Adams, Kilcreen; Robert Calder Blyth, Glasgow; James Reginald Purcell, Navan, co. Meath; William Douglas Cockburn, Catrine; Alexander Allan, Torrance Patrick Mitchell Colman O'Doherty, Armagh; Alexander Russell Young, Stenhousemuir (with distinction); Rudolf Baranov, South Africa; Denis Christopher Callaghan, Cork; John Webster, Paisley; and John Hutchison, Fyfe, Glasgow.

First Examination (Four Years' Course).—William Barclay, Kilbirnie; John Willett, Burland, Cheshire; John Arthur Aickin, Belfast; John Joseph O'Sullivan, Cork; James Marshall Campbell, Grange, Banff; John Dunlop, Beith; Samuel Graham Kinloch, Manchester; Thomas Dow, Crossford; and Herbert Davis Pitt, Willenhall.

Second Examination (Five Years' Course).—Harry Anderson Lunn, Jedburgh (with distinction); Robert John Roberts, Bala, N. Wales; Thomas Ernest Harty, Cork; David Roberts Williams, Borth, Portmadoc; Michael Bernard Conroy, co. Galway; Hugh Williams, Carnarvonshire; David Moodie, Galashiels; Herbert M'Master, Donaghadee; William Dalziel Sutherland, So. Shields; John Henry O'Sullivan, Galway; James Ninian M'Morris, Newfoundland; and Aloysius Francis Fleming, Youghal.

Second Examination (Four Years' Course).—Henry Johnston Fryer, Belfast; John Gemmell Welsh, Glasgow; John Anthony Freeman Hatch, Plymouth; John Kerr Bell, Lisburn; James Graham, Dublin; Joseph Caton-Shelmerdine, Avranches, France; John Willett, Cheshire; Richard M'Kim Wilkin, Sligo; Robert Galloway Whitelaw, Kirkintilloch; James James, Monmouthshire; Arthur Bryans, Sunderland; and Matthew O'Halloran, Tulla, co. Clare.

Third Examination.—David Scott Erskine Macnab, Calderhead (with distinction); George Russell Jarvis, Cambuslang; John Tudor Griffiths, Flintshire (with distinction); Robert Wardlaw, Linlithgowshire; Donald Duff, Glasgow (with distinction); John Allan, Glasgow; Adam Fox, Chapel-en-le-Frith; George Johnstone Campbell, Greenock; William Thomson, Glasgow; William Burns, Belfast; Charlotte M'Crea, Glasgow; James Joseph Lynch, co. Cork; Joseph Bernard O'Mahony, Midleton, co. Cork; John Joseph M'Nicholl, co. Derry; Wm. James Healy, New South Wales; Frederick William M'Cay, co. Antrim; Stuart Jackson Farrier, Nottingham; William Mason, Derbyshire; John Sykes, Southport; Thomas Randolph Hunter, Sheffield; John Bygott, Cheshire; Winifred Neil, Ceylon; Walter Hibbert, Bradford; Mary Eleanor Rocke, North Wales; Katharine Elizabeth Gregg, Gloucestershire; George Goldfoot, Liverpool; and Archibald Craig Balfour, Edinburgh.

Final Examination (and admitted Licentiates of the Three Co-operative Authorities).—John Scott, Ballycastle, co. Antrim; Henry Richard Macnee, Edinburgh; John Thomas Farren, Glasgow; Nelson Johnstone, St. Luke's, Cork; George Brownlie M'Kendrick, Wishaw; Daniel Francis Morgan, Edinburgh; George Augustus Thompson, Darwen; James Dunlop, Glasgow; Alexander Laurie Brown, Polloksheilds; Kennth Rodas Davalgnes Shaw, London; John Herbert Lawson, Girvan; Hamilton Joseph Bell, Dublin; Evelyn Stone Milestone, London; Henry Dodd, Birsay, Orkney; Robert Stewart, Glasgow; Walter Hibbert, Ilkley, Yorkshire; William Fredk. Cockayne Bennett, Upperthorpe, Sheffield; John Thomas Bradley, Belfast; Syed Hamad Ali, Edinburgh; Wasudeo Ramchandra Bhat, Edinburgh; John Willett, Tarpurley, Cheshire; John Joseph Porter, Belfast; Charles Scott Wilkinson, Edinburgh; George Maskell Freke, Edinburgh; Arno B. S. C. Morrogh, Madras; Edwin Joseph Ling, Glasgow; and Nanidh Rai Bharmavir, Edinburgh.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Erich Bennecke, Assistant in Professor Koenig's clinic in the Charité, has been recognised as *privat-docent* of Surgery, Dr. Sigmund Gottschalk as *privat-docent* of Midwifery and Gynæcology, and Dr. Albert Albu as *privat-docent* of Internal Medicine.—*Bologna:* Dr. Emilio Boari has been recognised as *privat-docent* of Medical Pathology and Dr. Giovanni Pini as *privat-docent* of Dermatology and Syphilography.—*Breslau:* Dr. Kausch of Strasburg has been recognised as *privat-docent* of Surgery.—*Copenhagen:* Dr. O. Bloch has been promoted to the Ordinary Professorship of Surgery.—*Geneva:* Dr. Albert Mayor has been appointed Ordinary Professor in the Medical Policlinic and Dr. August Reverdin Professor in the Surgical Policlinic, also Dr. Alcide Jentzer has been appointed Professor in the Gynæcological and Obstetric Clinic.—*Jena:* Dr. Gumprecht has been appointed Extraordinary Professor of Forensic Medicine.—*Rome:* Dr. Eugenio Rossoni has been promoted to the Ordinary Professorship of Medical Pathology.

MR. GUNTRIP KING has been appointed secretary to the Samaritan Free Hospital in the place of Mr. George Scudamore, retired.

CRICKET.—A cricket match was played at Exeter last week between a clerical eleven and a medical team. The game excited a considerable amount of interest and in the result the clergy were the winners by one run, scoring 220 against 219 made by their opponents.

THE ROENTGEN SOCIETY.—The report of the council for the year June 30th, 1898, to July 1st, 1899, states that the work of the society has made steady progress during the past year; 25 ordinary and three honorary members have been elected, bringing up the roll of membership to 148 ordinary and five honorary members. The treasurer closes the year with a fair balance in hand but large expenditure will have to be incurred so soon as the society finds a permanent home. Mr. Wilson Noble has been nominated as the president for the ensuing year and Dr. F. H. Low as honorary secretary.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Cubicles for Soldiers.

THE Secretary of State for War has determined to make an experiment with cubicles in the barracks at Woking and Dublin and if the experiment prove successful the system may be adopted elsewhere in carrying out the new scheme of barrack construction and r construction.

Isolation Hospitals (Amendment) Bill.

In view of probable opposition to this Bill, which has passed the House of Lords and stands for second reading in the House of Commons, the Government decline to put it into the category of Government measures. There is therefore very little likelihood that it will be passed this session.

Withdrawal of the Lunacy Bill.

The Bill to amend the Lunacy Laws, which had passed through all its stages in the House of Lords, was on Monday, July 31st, withdrawn in the House of Commons, where it had got no further than the reading stage.

HOUSE OF LORDS.

MONDAY, JULY 31ST.

Oysters Bill.

On the motion of Lord HARRIS this Bill was withdrawn. His lordship explained that the intention of the Local Government Board in introducing the Bill was to protect as far as possible the public health from attack from diseased oysters, and the Board selected as the authorities for putting the Bill into operation the councils of counties and boroughs. The Select Committee to whom the Bill had been referred had, however, substituted the local district fisheries committees and the Board of Trade decided that the change rendered the measure impracticable.

Sale of Food and Drugs Bill.

This Bill was read a second time on the motion of Viscount CROSS.

TUESDAY, AUGUST 1ST.

Sale of Food and Drugs Bill.

At this sitting the Committee Stage of the Sale of Food and Drugs Bill was taken. The following new clause was inserted in the Bill—viz.: "The provisions of section 3 and section 4 of the Sale of Food and Drugs Act Amendment, 1879 (relating to the taking of samples of milk in course of delivery), shall apply to every other article of food; provided that no samples shall be taken under this section except upon

the request or with the consent of the purchaser or the consignee"; while to clause 19 the following sub-section was added—viz.: "(6) every person who, in respect of an article of food or drug sold by him as principal or agent, gives to the purchaser a false warranty in writing, shall be liable on summary conviction, for the first offence, to a fine not exceeding £20, for the second offence to a fine not exceeding £50, and for any subsequent offence to a fine not exceeding £100, unless he proves to the satisfaction of the court that when he gave the warranty he had reason to believe that the statements of descriptions contained therein were true."

HOUSE OF COMMONS.

THURSDAY, JULY 27TH.

The Case of Mr. Lamont.

Sir CHARLES CAMERON asked the Lord Advocate (1) whether the attention of the Scottish Local Government Board had been called to a resolution passed by the South Uist Parish Council on July 19th asserting that the children whose cases formed the subject of the charges in respect of which Mr. Lamont was in March last unanimously acquitted by an Inverness jury had not been effectively vaccinated and directing their clerk to take legal steps to have the certificates of vaccination reduced and rescinded and the entries in the parish registers relating to them deleted with a view of placing the names of the children and their parents on the list of defaulters; (2) whether, before spending the money of the ratepayers in litigation with a view to compelling the parents of these children under penalty of fine or imprisonment to submit their children to revaccination, any attempt had been made by the parish council to ascertain whether they objected to the operation in any cases in which the medical officer might consider that operation desirable; (3) in how many of the 16 cases vaccinated by Mr. Lamont and alleged by the parish council not to have been effectually vaccinated the local authorities had allowed the statutory age to elapse prior to Mr. Lamont's appointment without taking any steps to enforce vaccination; and (4) whether, in case it should appear that the legal proceedings threatened are vindictive and unnecessary, the official auditor had power to protect the ratepayers by surcharging the members of the parish council with the costs incurred.—The LORD ADVOCATE replied: As regards the first, second, and third paragraphs of the question the Local Government Board have no information except what has been derived from the newspapers and cannot therefore at present either affirm or deny the accuracy of the statements made. As to the last paragraph, the official auditor in Scotland has no power of surcharge, his duty being limited to reporting to the Local Government Board any payments which he may consider illegal. The question as to surcharging or not depends upon the Board and it is impossible to pronounce an opinion till the facts are known.

Venereal Disease in the Straits Settlements.

Mr. HENRY J. WILSON asked the Secretary of State for the Colonies whether an ordinance in reference to venereal disease had lately been passed in the Straits Settlements and whether he would lay upon the table any correspondence on the subject, as promised on May 8th, 1898, together with a copy of the ordinance.—Mr. CHAMBERLAIN replied: A Bill has been introduced into the Legislative Council of the Straits Settlements on lines suggested by me dealing with the subject of the hon. Member's question and the protection of women and girls. It will shortly be passed with slight amendment. The correspondence will be given at once.

Vaccination Returns.

Mr. LLEWELLYN asked the President of the Local Government Board whether his attention had been called to the increase in the number of children certified as successfully vaccinated in the Axbridge Union of the county of Somerset during the first six months of the present year as against a similar period of 1898, and whether he could state the figures.—Mr. CHAPLIN replied: It appears from the return which has been made to the Local Government Board that the number of certificates of successful primary vaccination received by the vaccination officers of the Axbridge Union during the first six months of 1898 was 81 and the number during the first six months of the present year was 415, an increase of 334, or over 400 per cent.

FRIDAY, JULY 28TH.

The Aldershot Sewage Farm.

Mr. JEFFREYS asked the Under Secretary of State for War whether he could give a return of the trading profit and loss account and balance-sheet for the preceding year of the Camp Sewage Farm at Aldershot; whether he was aware that the milk had to be sold at a lower price than other milk in the same district on account of the proximity of the sewage outfalls; whether the War Office had been obliged to expend the sum of £3300 during the last year on the drainage and buildings of this farm; and if it was intended to spend more money on endeavouring to turn this sewage farm into a dairy farm for the purposes of selling milk.—Mr. WYNDHAM replied: There was a small loss on the farm account of last year, but the farm nevertheless fulfilled economically the purpose for which it was established—namely, the disposal of the camp sewage—capital outlay as well as current expenses being taken into account. In view of the recent report of Dr. Andrewes, confirmed as it has since been by observations of the medical officer of health for the county, it has been decided to continue the farm as at present constituted and to keep a close watch on the conditions which manifest themselves. So far no nuisance or danger to health has presented itself, even under the trying conditions which have prevailed during the exceptionally hot weather of the last few weeks. Directions have been given that the milk from the farm is not to be sold below the current rates of the district.

London Water-Supply.

Mr. PICKERSGILL asked the President of the Local Government Board what steps, if any, he had taken under the powers conferred on the Board by the Metropolis Water Act, 1899, to render the supplies of the different companies mutually available in case of emergency, and especially to protect the East-end of London against the sufferings and inconvenience experienced in former years.—Mr. CHAPLIN replied: Communications have been effected between the mains of the Southwark and Vauxhall and the East London Companies and between the Grand Junction, the West Middlesex, and the New River Companies. The New River Company is also in communication with the East London Company and the Kent Company is laying a main to communicate with the Southwark and Vauxhall Company. The East London Company has, since the middle of June, been receiving water from the New River and the Southwark and Vauxhall Companies. According to our latest information there were considerably over 100,000,000 gallons in the reservoirs of the East London Company, and I see no reason to doubt that the measures taken will be effectual to meet the needs of East London during the present summer.

Venereal Disease at Gibraltar.

Mr. PIERPOINT asked the Under Secretary of State for War whether, since the reception of the report of the committee appointed to inquire into the general and sanitary condition of Gibraltar, any steps had been taken, and if so what, in respect of the venereal disease prevailing amongst the garrison; whether he would give the statistics of such disease in the Royal Artillery, in the Royal Engineers, in the Grenadier Guards, in the Coldstream Guards, and in the Manchester Regiment respectively; whether the report of the committee would be laid upon the table without further delay; and whether the Governor had absolute power to send out of Gibraltar, without reason given, any person who was likely to spread disease amongst the troops.—Mr. WYNDHAM replied: The recommendations of the committee have necessitated a good deal of correspondence between the three departments concerned—the War Office, the Admiralty, and the Colonial Office—and there is every reason to believe that an agreement will be come to with regard to the more important points. I am unable to give the information asked for in the second question as the statistics do not distinguish between corps. The new Governor will assume office in the autumn and his views will be ascertained before a final decision is arrived at. The Secretary of State will consult the Colonial Office and the Admiralty as to the desirability of presenting the report to Parliament.

Mr. PIERPOINT asked the First Lord of the Admiralty what were the statistics of venereal disease amongst the crews of Her Majesty's ships which had been contracted, or presumably contracted, at Gibraltar, and whether he had received from the Admirals of the Channel or Mediterranean fleets, or from any of the officers commanding any of Her Majesty's ships stationed at, or calling at, Gibraltar in the last 12 months any complaints or reports concerning the prevalence of such disease at Gibraltar.—Mr. GOSCHEN replied: The number of cases of venereal disease among the crews of Her Majesty's ships treated at Gibraltar Hospital has averaged during the last five years 89 annually. In the last year the number was 134. No such communications as those referred to in the last paragraph of the question have been received at the Admiralty, but I am aware that the state of things is far from satisfactory and it has not failed to receive my careful attention.

MONDAY, JULY 31ST.

Medical Provision on Board Ship.

Mr. WILLIAM JOHNSTON asked the President of the Board of Trade whether his attention had been drawn to the recommendations of the Committee appointed by the Board of Trade to revise the medical scales for merchant vessels that as regards merchant ships which carry no medical man no ship should be allowed to proceed on a long voyage unless there should be someone on board who had passed through a course of instruction in first aid to the wounded, and also that it should be made compulsory on every mate who presented himself for examination for a master's certificate that he should produce evidence that he had passed through such a course of instruction; and whether he would have these recommendations carried out as soon as possible in merchant vessels and fishing smacks.—Mr. RITCHIE: Yes, sir, the recommendation to which my hon. friend refers was laid before me in May last and is receiving careful consideration. At present the Board of Trade are in communication on the subject with the several interests concerned. I may add that the recommendation only refers to long voyage ships and does not include fishing-smacks.

Defective and Epileptic Children.

While the Elementary Education (Defective and Epileptic Children) Bill was in Committee a sub-section was added to Clause 1 (power to school authority to determine what children are defective or epileptic) providing that "for the purpose of ascertaining whether a child is defective or epileptic, within the meaning of this section, a certificate to that effect by a duly qualified practitioner approved by the Education Department shall be required in each case. The certificate shall be in such form as may be prescribed by the Education Department."

TUESDAY, AUGUST 1ST.

Typhoid Fever in India.

General RUSSELL asked the Secretary of State for India whether his attention had been called to the yearly increasing virulence of typhoid fever in India, although a few years since this disease was almost unknown in that country; and whether any report had been received by the Government of India as a result of the investigations which more than two years since he stated were then being conducted into the causes of this disease; and, if so, whether this report would be laid upon the table of the House.—Lord GEORGE HAMILTON: I have observed with regret the increasing prevalence of enteric fever in India, a subject which is continually engaging the attention of the Government of India. I would point out, however, that the virulence of the disease, as tested by the ratio between the number of deaths and the number of admissions to hospital per 1000 of the British troops in India has decreased. From 1878 to 1883 it was nearly one to two, from 1884 to 1888 about one to three; since then not much more than one to four. No general report has been issued as a result of the investigations which are being pursued into the origin of enteric fever in cantonments in India, but I have received special reports from the Government of India on the sanitary conditions of certain cantonments which have been made the subject of individual investigation. Steps have been taken to remedy the defects reported. With reference to the reply which I gave to my honourable and gallant friend's question of Feb. 23rd last I may state that voluntary inoculation against enteric fever at the public expense among the British troops in India has now been sanctioned.

The Condition of the Thames.

In reply to a question addressed to the President of the Local Government Board by Mr. COGHILL as to the condition of the Thames between London and Purfleet Mr. T. W. RUSSELL said: My right hon. friend has communicated with the Conservators of the River Thames on this subject and he is informed that the only specific complaint they have received related to the condition of the river on July 21st, when the harbour-master reported that the water was black, with an unpleasant odour, at Jenningtree Point, the discolouration being traceable to the metropolitan main drainage outfall. The outfall works are under the control of the London County Council and the Conservators have brought the report under the notice of the Council. The Conservators further state that inquiries have been made by their officers on the river as to the recent condition of the water, and they report that during the past week or two the condition of the water has not been satisfactory. They consider this due in some measure to the hot weather, but are of opinion that the river water in the neighbourhood of Crossness has recently been affected by the discharge from the main drainage outfall. The attention of the London County Council will be called to the matter.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

AITKEN, W. L., M.B., Ch.B. Melb., has been appointed Acting Officer of Health for the City of South Melbourne, Victoria, Australia.

BEGG, WM., M.B., Ch.M. Edin., has been appointed Officer of Health for Walhalla Shire, Victoria, Australia, vice W. A. Forsyth, resigned.

BENNETT, NORMAN G., B.A., B.C. Cantab., L.D.S., has been appointed Dental Surgeon to the Great Northern Central Hospital, Holloway-road, N.

BEST, P., Jun., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for St. Ives, Cornwall.

BLACK, R., L.R.C.P., L.R.C.S. Edin., has been appointed, *pro tem.*, Principal Medical Officer, Superintendent of Vaccination, and Chairman of the Central Board of Health for West Australia.

BLACK, L. P., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Rural District Council, Braintree.

BREWIS, A. S., M.D. Durh., Ch.B., M.R.C.S., has been appointed a Public Vaccinator for the District of Huntly, New Zealand.

BROWN, W. S., M.R.C.S., L.S.A., has been appointed an Official Visitor to the Hospital for the Insane, Parramatta, New South Wales, vice G. H. Phillips.

BUTLER, JAMES, M.B., C.M. Glasg., has been appointed Senior Assistant Medical Officer, Govan District Asylum, Hawkhead, vice Francis O. Simpson, resigned.

CAROLAN, J. P., M.R.C.S., has been appointed a Public Vaccinator for the District of Paparoa and Tokatoka, New Zealand.

CHENERY, A., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator for South Australia.

CROWTHER, R. B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Luddenden Sanitary District of the Halifax Union, vice Thomas Crowther, resigned.

CUPPAIDGE, JOHN LOFTUS, M.D., B.Ch. (Dublin), has been re-appointed Medical Officer to the Totnes Cottage Hospital.

GIBSON, GEORGE JOHN, M.D., M.Ch. Irel., has been re-appointed Medical Officer to the Totnes Cottage Hospital.

GOOD, H. A., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator for the District of Waimate Plains and Opunake, New Zealand.

GRAHAM, C. H., L.R.C.P. Lond., F.R.C.S. Edin., M.R.C.S., has been appointed a Public Vaccinator at Tungamah, Victoria, Australia, vice A. F. Hepworth, resigned.

GÜNTHER, H. A., M.B., has been appointed House Surgeon to the Great Northern Central Hospital, Holloway-road, N.

HAINS, L. J. CARY, L.R.C.P., L.R.C.S. Edin., J.P., has been re-appointed Medical Officer to the Totnes Cottage Hospital.

HASSELL, G., M.D., Ch.M. Aberd., has been appointed Medical Superintendent for the Lunatic Asylum at Porirua, New Zealand.

HODGES, G., M.B., M.S. Edin., has been appointed Health Officer for the Port of Dunedin, New Zealand, vice J. Cunningham. Also to be a Public Vaccinator for the District of Port Chalmers, New Zealand.

HORDER, THOMAS J., M.B., B.Sc. Lond., has been appointed Physician to Out-Patients at the Great Northern Central Hospital, Holloway-road, N.

JACK, A., M.B., Ch.M. Glasg., has been appointed Acting Official Visitor to the Reception House at Townsville, Queensland.

JOHNSON, S., M.D., M.Ch. Irel., has been appointed Medical Officer to the Town Council, Stoke-on-Trent.

KING, T. R., M.D. Edin., has been appointed Medical Superintendent to the Mount View Lunatic Asylum at Wellington, New Zealand.

LAING, J. A., M.B., M.S. Edin., has been appointed a Public Vaccinator for the District of Auckland, New Zealand.

L'ESTRANGE, H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer at Charleville, Queensland, vice W. B. Kirkaldy, resigned.

LONNON, FREDERICK, M.R.C.S., L.R.C.P., and L.D.S. Eng., has been appointed Dental Surgeon to the Gordon Boys' Home, London.

LOTZ, H. J., L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been appointed a Member of the Board of Management of the Fremantle Hospital, West Australia.

MILES, W. ERNEST, F.R.C.S. Eng., has been appointed Assistant Surgeon to the Cancer Hospital (Free), Brompton, and also Surgeon to Out-patients to the Gordon Hospital for Diseases of the Rectum, London.

MUSPRATT, E. L. C., L.S.A., F.C.S., has been appointed Resident Medical Officer of the Wolverhampton Medical Association in succession to W. S. Mercer.

PARSONS, WALTER BROCK, M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the North-West London Hospital, Kentish-town-road, N.W.

PATON, R. THOMSON, M.D. Brux., F.R.C.S. Edin., L.R.C.P., L.R.C.S. Edin., has been appointed Director of Charitable Institutions by the Government of New South Wales.

PAUL, G. W. F., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed an Honorary Representative of Queensland at the Greater Britain Exhibition, Earl's Court, London.

PURVIS, W. PRIOR, B.Sc., M.D., M.S. Lond., F.R.C.S. Eng., has been appointed Surgeon-in-Charge of the Ear and Throat Department of the Royal South Hants Infirmary, Southampton.

RENTZSCH, S. HENRY, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the South District of the Stratton (Cornwall) Union, vice A. H. Minton, resigned.

SMITH, K. RAWLINGS, M.D., B.S. Lond., M.R.C.S., L.S.A., has been re-appointed Medical Officer to the Totnes Cottage Hospital.

SMITH, F. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Attendant to the men in the employ of the St. George's Vestry, St. Saviour's Union, London.

SOUTHWELL, C. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer to the Town Council, Stoke-on-Trent.

STEVENS, WILLIAM MITCHELL, M.D., L.R.C.P. Lond., M.R.C.S., has been appointed Pathologist to the Cardiff Infirmary.

SUTHERLAND, L. R., M.B. Glasg., C.M., has been appointed to the Chair of Pathology in St. Andrew's University, vice Professor Muir.

WHITELAW, F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Black Torrington Sanitary District of the Holsworthy Union.

WILLIAMSON, R. T., M.D. Lond., M.R.C.P., has been appointed Honorary Physician to the Ancoats Hospital, Manchester.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50 per annum, with board, &c.

BIRKENHEAD UNION.—Assistant Medical Officer for the Infirmary, Workhouse, and Schools. Salary £80 per annum, with board, washing, and apartments but no extra fees. Applications to the Clerk to the Guardians, 45, Hamilton-square, Birkenhead.

CHELTENHAM GENERAL HOSPITAL.—Assistant House Surgeon for two years, unmarried. Salary £100 per annum, with board and lodging.

COUNTY ASYLUM, Gloucester.—Junior Assistant Medical Officer, unmarried. Salary commences at £120 per annum, rising £10 yearly to £150, with board (no stimulants) and washing.

DEVON COUNTY ASYLUM, Exminster.—Locum Tenens for eight weeks. Salary £3 3*s.* per week, with board and lodging.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, to reside and board in the hospital, unmarried. Salary £80.

DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Salary £100 per annum, with rooms, board, and washing.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

GUY'S HOSPITAL MEDICAL SCHOOL, London, S.E.—Lecturer on Biology; also Demonstrator of Chemistry and Physics. Apply to the Dean.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Resident Medical Officer. Salary £100 per annum, with board and residence. Also Resident House Physicians for six months. Honorarium of £25 each.

LIVERPOOL DISPENSARIES, Moorfields, Liverpool.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and residence.

LUNATIC HOSPITAL, The Coppice, Nottingham.—Assistant Medical Officer, unmarried. Salary £150 a year, with apartments, board, attendance, and washing.

MACCLESFIELD INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence.

MANCHESTER ROYAL INFIRMARY.—Medical Registrar. Non-resident. Salary £30 per annum.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer, *pro tem.*, at the Leavesden Asylum, near Watford, Herts. Salary £3 3*s.* a week with the usual residential allowance. Apply to the Medical Superintendent.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E. Junior Resident Medical Officer for six months. Salary at the rate of £40 per annum, with board, attendance, and washing.

OWENS COLLEGE, Manchester.—Demonstrator in Anatomy for the Winter Session.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon.

PADDINGTON, London.—Assistant to the Medical Superintendent of the Infirmary, and Assistant Medical Officer of the Workhouse, unmarried. Salary £100 per annum, rising £10 annually to £120, together with board, lodging, and washing.—Apply personally to the Medical Superintendent at the Infirmary, 285, Harrow-road, W.

ROCHDALE INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £90 per annum, with board, residence, and laundry.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 per annum, with furnished quarters, board, washing, and attendance.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HALIFAX INFIRMARY.—House Surgeon, unmarried. Salary £80 per annum, advancing £10 a year to £100, with an extra allowance of £9 2s. 6d. per annum. Residence, board, and washing provided.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House Surgeon, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior Out-patient Surgical Officer. Salary £50.

SEAMEN'S HOSPITAL SOCIETY (*Dreadnought*), Greenwich.—Senior House Surgeon for the Branch Hospital in the Royal Victoria and Albert Docks, E. Salary £75 per annum, with board and residence and an additional £25 per annum if certain clinical work is performed satisfactorily.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road, London.—Resident Medical Officer, unmarried. Salary £105, with residence and attendance. Apply to the Hon. Sec., 23, Gordon-street, W.C.

TYNEMOUTH INFIRMARY.—House Surgeon. Salary £100 per annum, with board, apartments, and washing. Apply to the Secretary, 43, Howard-street, North Shields.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne.—Lecturer in Midwifery and Diseases of Women and Children.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W., and the VICTORIA CONVALESCENT HOME, Broadstairs.—House Surgeon for six months. Honorarium at the rate of £50 per annum, with board and lodging in the hospital.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WEST KENT GENERAL HOSPITAL, Maidstone.—Assistant House Surgeon, for six months. Honorarium at the rate of £50 per annum, with board and residence.

WESTMINSTER HOSPITAL.—Pathologist. Salary £250 per annum, and £80 per annum, will be allowed for expenses, including the services of an Assistant.

WORKSOP, NOTTS.—Medical Officer at the Worksop Dispensary. Salary £120 per annum, with house, coals, gas and attendance.

Births, Marriages, and Deaths.

BIRTHS.

BOYD.—At Richmond, Nelson, New Zealand, on June 14th, 1899, the wife of A. B. Boyd, M.B. Oxon., of a son.

CAZALET.—On July 29th, at Grey Friars-green, Coventry, the wife of Grenville W. Cazalet, L.R.C.P. Lond., M.R.C.S., of a son.

COWNIE.—On July 26th, at 89, Severn-road, Cardiff, the wife of James F. Cownie of a daughter.

DEANSLEY.—On July 31st, at Waterloo-road South, Wolverhampton, the wife of Edward Deansley, M.D., F.R.C.S., of a daughter.

EDELSTEN.—On July 29th, at Brixton-road, S.W., the wife of Ernest A. Edelsten, M.A., M.B. Oxon., of a daughter.

ELLIS.—On June 29th, at Sepoy Lines, Singapore, the wife of Dr. W. Gilmore Ellis of a daughter.

FRASER.—On July 22nd, at Epworth, St. Edward's-road, Southsea, the wife of A. Mearns Fraser, M.B., of a daughter.

GARMAN.—On July 24th, at Oakeswell Hall, Wednesbury, the wife of Walter Garman, M.D., of a daughter.

GOODCHILD.—On July 30th, at Highgate-road, N.W., the wife of N. John Goodchild, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

MONRO.—On July 27th, at Queen's-gardens, Muswell-hill, N., the wife of J. D. R. Monro, M.B., of a daughter.

MARRIAGES.

BARENDT—CROWE.—On July 27th, at St. Augustine's Church, Liverpool, by the Rev. W. J. Adams, vicar, assisted by the Rev. J. Henderson, rector of St. Pancras, Chichester, Frank Hugh Barendt, M.D. Lond., F.R.C.S. Eng., of 65, Rodney-street, Liverpool, third son of the late J. E. Barendt of Liverpool, to Mary Burchall (May), eldest daughter of Mrs. Crowe, 47, Bedford-street North, Liverpool.

GUTHRIE—POWER.—On July 26th, at Frant Church, Thomas Clement Guthrie, M.B., to Norah, second daughter of Sir William Tyrone Power, K.C.B., of Kilmore, Tunbridge Wells.

SIMPSON—HARBOUR.—On July 26th, at St. Alban's Church, Tattenhall, Cheshire, G. F. B. Simpson, M.B., Ch.B., second son of Professor Simpson, M.D., Edinburgh, to Caroline Elizabeth, eldest daughter of George Barbour, of Bolesworth Castle, Cheshire.

DEATHS.

KEENE.—On July 31st, at Merton House, Grantchester, Cambridge, Frederick Joseph Keene, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., aged 66 years.

PILLEAU.—On July 28th, at Brighton, Henry Pilleau, R.I., Deputy Inspector-General of Hospitals, of Kensington Court-mansions, W., aged 86 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"THE WORKMEN'S COMPENSATION ACT, 1897."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 29th, 1899, under the above heading, a letter appears from "L.R.C.P. & S. Edin.," in which he asks if certain actions are in contravention of the Act. In his letter he states that "under the new Act it is now necessary for a certifying surgeon to be appointed by the owners and to be quite independent of the men." This is a mistake. The medical referee has to be independent of both employer and workman and apparently your correspondent has confused the medical referee appointed by the Home Secretary with the medical man who may be appointed by the employer to examine and report upon the condition of an injured workman. Schedule 1, Section 2, says: "Where a workman has given notice of an accident, he shall, *if so required* by the employer, submit himself for examination by a duly qualified medical practitioner provided and paid by the employer, and if he refuses ....." &c. Again, Section 11 says: "Any workman ..... shall if so required by the employer ..... submit himself for examination by a duly qualified practitioner provided and paid by the employer or such other person, but if the workman objects ..... or is dissatisfied by the certificate of such practitioner upon his condition when communicated to him, he may submit himself for examination to one of the medical practitioners appointed for the purposes of this Act as mentioned in the second schedule to this Act ....." &c. (Section 13, Schedule 2—i.e., Medical Referee.) It is clear, therefore, that there is no *obligation* upon the employer to appoint a medical man "who shall be independent of the men." It is purely optional upon his part. If he chooses to accept the certificate of *any* medical practitioner, whether paid by the man or by himself or some other person, he is at perfect liberty to do so, but he cannot compel the workman to submit to the examination of any particular medical man unless he (the employer) himself pays the medical man for the examination. If the employer pays for the examination the man (for the purposes of the Act) is bound to submit to it, no matter who the practitioner may be. On the other hand, the workman need not abide by the certificate of the practitioner in question but may appeal to the medical referee, by whose decision both employer and workman are bound and from which, when formally given, there is no appeal. It appears that your correspondent is aggrieved because, he having refused a certain appointment offered to him by the employers as their "certifying surgeon" another practitioner accepted it and this practitioner, through his assistant, is daily in practice among the men at a particular colliery. He asks if this is not in contravention of the Act. From the above it is clearly *not* in contravention of the Act, but it may be in contravention of a certain agreement as between himself and the colliery owners or between the colliery owners and the other practitioner in question. This, of course, it is impossible to say without having the said agreement to refer to, but if it is his remedy will lie at common law, and doubtless any solicitor will advise him correctly. The italics in the foregoing are, I should add, my own.

I am, Sirs, yours faithfully,

MURTAUGH HOUGHTON,

Medical Referee under Workmen's Compensation Act, 1897 late medico-legal consulting surgeon to several large unions.

Ilford, Essex, August 1st, 1899.

THE REPAYMENT OF INCOME-TAX.

To the Editors of THE LANCET.

SIRS,—I should be very much indebted to any correspondent who could give me the address of a society for the repayment of income-tax. I believe there is such a society in existence which makes a special business in recovering overpaid income-tax.

I am, Sirs, yours faithfully,

August 1st, 1899. S.

THE DUTIES AND RESPONSIBILITIES OF A CORONER.

To the Editors of THE LANCET.

SIRS,—I had been attending an old lady (a marriage connexion of my own) for rheumatism and neuralgia, which had confined her to bed for a month or so. She had only just begun to get about again when in getting into bed one evening in the usual way the femur snapped and she sustained a spontaneous fracture in the middle third of the bone. I may say that she had complained of pain in the exact seat of fracture for some days previously. The fracture did not unite, but sores and erysipelas set in and the patient died three months after the above occurrence. Now, not regarding the fracture as an accident, in the legal or any other sense, and in view of the time that had elapsed before death occurred, and not knowing or having forgotten also the time-limit in such cases, I gave the injury as the primary cause of death. This was not accepted by the registrar, who communicated with the coroner, and the latter, in spite of all explanation and protest on my part, insisted on an inquest, which was duly held, to the great grief and inconvenience of the relatives. As there

was no accident and no violence, for we cannot call natural and ordinary muscular action violence, and as there had been antecedent disease, I maintained that an inquest was both unnecessary and unjustifiable, and that especially as the coroner was a medical man my explanation ought to have been accepted. Surely this was a case for the exercise of that discretion which is left to the coroner and not for the display of an arbitrary and absurd adherence to the letter of the law. May I ask if there are any means of checking a coroner in this sort of case apart from evading an inquest by the quite justifiable omission of an important, but virtually secondary, factor in the causation of death? Would there be any use in bringing the case under the notice of the Home Office in view of the possible prevention of such an abuse of authority in the future? Hoping to be excused for troubling you in this matter, which gave me at the time much trouble and annoyance.

I am, Sirs, yours faithfully,

West Hill, Sydenham, S.E., August 2nd, 1899. J. K. BRIGHAM.

"A POINT OF COURTESY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 29th there appeared a paragraph under the above headline. In the advertising columns of the same issue a gentleman is advertising for a post as assistant or locum. Being in want of someone to take charge of my practice I wrote and asked him if he would do so and asked him to wire me yes or no, for which purpose I enclosed six stamps. My letter would reach THE LANCET office on Friday evening, July 28th. Up to now (the evening of August 1st) I have not received any reply. Surely the advertiser might have replied at least by letter with one of my own stamps? I should imagine this gentleman to be fully capable of taking charge of Number One.

I am, Sirs, yours faithfully,

August 1st, 1899. D. B.

"BIRDS OF A FEATHER."

To the Editors of THE LANCET.

SIRS,—Permit me to make a few corrections and additions to "V. B. F.'s" letter in THE LANCET of July 29th. 1. Mr. "X." applied for his diploma at the instigation of Mr. "V. B. F." who is also a L.D.S. and was anxious to join Mr. "X." himself, hence his desire for him to qualify. 2. The false declaration referred to was in respect of advertising and in the very same paper that contained Mr. "X.'s" advertisement there also appeared a very glaring and displayed advertisement of Mr. "V. B. F." 3. Mr. "X." has not entered into partnership with anyone.

I am, Sirs, yours faithfully,

August 1st, 1899. ONE WHO KNOWS.

*** This correspondence cannot be continued in our columns. The matters at issue are matters of fact and the persons concerned know who is telling the truth.—ED. L.

THE NOTIFICATION OF EPILEPTICS, IDIOTS, AND IMBECILES.

A CORRESPONDENT directs our attention to a circular from the chairman of a committee appointed by the county council of Glamorganshire to ascertain the number of sane epileptics, idiots, and imbeciles (not paupers) in the county. The circular is addressed to medical men with a request for information of private cases of the sort known to them. The object of the guardians who moved the county council is doubtlessly humane and praiseworthy, but we share with our correspondent surprise at the suggestion. It seems to us open to great objection. A medical practitioner should only divulge the weaknesses of his patients when compelled to do so by law or requested by his patient or his patient's friends. To do so secretly, even to serve philanthropic purposes, is not, we think, allowable.

A PLAGUE OF ANTS.

To the Editors of THE LANCET.

SIRS,—Would any of your readers kindly inform me of some method to prevent ants entering a house and getting into the store cupboard, &c.? For the last few weeks we have been much troubled with them.

I am, Sirs, yours faithfully,

July 31st, 1899. H. J. W.

THE TREATMENT OF MALARIAL FEVERS.

To the Editors of THE LANCET.

SIRS,—After some experience in treating malarial fevers—including three and a half years in Rhodesia—I should like to record my impression that mistura chlori et quininæ (Dr. Burney Yeo) is a valuable remedy. Everyone knows that quinine is a specific for intermittent fever, but in the remittent type it appears to be less effective and not seldom inactive. The continued forms of malarial fever are quite common here and it is in these cases that one often wishes for another remedy besides quinine. I have used the latter very freely, giving enough to maintain well-marked cinchonism, and still found it apparently useless in many instances. Sometimes the diagnosis between malarial and enteric fevers was difficult. On administering the mistura chlori et quininæ—recommended by Dr. Burney Yeo for typhoid fever—in one or two doubtful cases the fever quickly subsided and that after large doses of quinine (two or three scruples per diem) had been used in vain. The amount of quinine given in the mixture was about from 10 to 15 grains in 24 hours, seldom enough to affect the hearing. During the past six months nearly all my cases of malarial fever have been put on the mixture with very satisfactory results. Occasionally I left out the quinine and found it effective. As the number of cases during last season was comparatively small I was unable to test the properties of chlorine as an antiperiodic thoroughly but tried it with quinine in nearly 50 cases. I am not aware that mixtures containing free chlorine have been advocated before in the malarial fevers, so think it worth suggesting a more extended trial.

I am, Sirs, yours faithfully,

Gwelo, June 29th, 1899. H. KENNEDY SMYTH, M.B.R.U.I.

"PHYSICIAN AND SURGEON."

To the Editors of THE LANCET.

SIRS,—A writer to THE LANCET of July 29th, who assumes the titles of "*bonâ fide and real* physician and surgeon" seems to be unaware of the fact that the law of the land has already decided that only an M.D. is entitled to call himself a physician, but perhaps "Physician and Surgeon" wishes to be a law unto himself. Some years ago, before the establishment of the Conjoint Board, a friend of mine asked the following question: "If I pass the examinations for the L.R.C.P. Lond. will the Royal College of Surgeons of England prosecute me if I also call myself surgeon?" The answer which was given by the then Registrar of the Royal College of Physicians of London was: "So far as I am aware there is nothing in the diploma of the Royal College of Surgeons of England which confers the title of 'surgeon' upon any of its members," and, I would add, that so far as I can see there is nothing in the diploma of the Royal College of Physicians of London which confers the title of "physician" upon its Licentiates. It would appear as if some men use their brains in squabbling about titles and trying to prove that they are what they are not. My own opinions are that "a rose by any other name would smell as sweet," and also that "one man is as good as another, and better."

I am, Sirs, yours faithfully,

M.D., M.R.C.S., and L.S.A.,

August 2nd, 1899. But not a *bonâ fide and real* L.R.C.P.

THE LAURIA FUND.

To the Editors of THE LANCET.

SIRS,—In answer to Mr. Victor Horsley's appeal on behalf of the widow and children of the late Mr. Lauria in THE LANCET of July 29th we beg to say that the following amounts have been received.

We are, Sirs, yours faithfully,

JOHN H. BARRS, 6, Wandsworth-bridge-road, S.W., } Hon.
EDWARD B. HARTNELL, 1, Ryecroft-street, Fulham, S.W., } Secs.

	£	s.	d.		£	s.	d.
Claud Worth	2	2	0	J. H. B.	2	2	0
W. Domett Stone	1	1	0	G. W. G.	1	1	0
K.; W. M....	1	1	0	E. D. Coates	1	1	0
K.	0	10	0	Jas. Whitson	3	3	0
Volens	1	1	0				

ANTISEPTICS, ANCIENT AND MODERN.

MR. C. B. ROSSITER, F.R.C.S. Edin., writes:—

"In the course of a conversation with an old farmer friend the other day we happened to be discussing the preservation of milk by the aid of borax and similar agents. I mentioned that occasionally milk would not 'keep' until the evening if purchased from a certain farm, whereas if obtained from him it remained 'sweet' considerably longer. This he explained on the grounds of the greater cleanliness exercised by him in storing it, and on inquiring as to his particular method of battling with milk bacteria I was somewhat startled when he informed me that after scouring and scalding the cans in the usual manner they were well rubbed all over with a handful of stinging nettles (*Urtica dioica*). His reason for the latter procedure was rather vague—'It helped to keep the milk' as he knew from an experience of over 50 years, but how or why it became a fairly general practice in this locality I was unable to find out. Now, what probably happened during this cleansing process? The rubbing caused the sting glands to be crushed, the contents—viz., formic acid—were set free, and we have then one of the most powerful modern antiseptics applied in a most rational manner with a most scientifically explainable result. The up-to-date professor of agricultural chemistry informs us that a very weak solution of formalin will preserve milk and is a most efficient general antiseptic."

The story forms a curious example of the oft-noted fact that the empirical processes of ancient husbandry had a scientific basis, though Hodge could not give any better reason for his action than that they were those of his forbears.

ALCOHOL IN HOT CLIMATES.

THE view that mischievous effects very readily follow the habitual use of alcoholic drinks in warm climates has long been accepted as an axiom of medical belief. The great offence which some recent expressions of this truth are said to have caused is therefore not a little surprising. One of the latest protests against a too prevalent habit is that of Bishop Tugwell, who holds that 75 per cent. of deaths among Europeans on the West African Coast are due to a general and reckless consumption of alcohol—i.e., stimulants. We do not now concern ourselves with the absolute exactness of the figures quoted or with the Bishop's strictures

on existing regulations as to the sale of intoxicants. As regards the reality and magnitude of the evil which he seeks to combat there can be but one intelligent opinion. That, we repeat, is, particularly under the conditions of life in West Africa, entirely unfavourable to the customary use of alcoholic liquors. It should not be forgotten that the natural purpose of stimulation by such means is to encourage the nutrition of tissues where this is defective as in states of physical weakness. To urge on this process where it is already carried out in a healthy manner is to induce over activity and tissue repletion with consequent depression of energy, and though these effects may be capable of correction in a considerable degree with the aid of active exercise and an exhilarating atmosphere they are far more likely to remain as a source of injury under tropical conditions. The multiplied experience of individuals and of armies on foreign service have abundantly proved that a system of abstinence is that which best provides both for personal safety and for the effective performance of active duty.

"Humbugged."—In our opinion the remark was too sweeping. Our correspondent gives no references so that we may see if the context puts a different complexion upon the words.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 3rd, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
July 28	30·33	N.W.	...	118	79	57	57	62	Fine
" 29	30·22	N.W.	...	123	84	59	58	64	Fine
" 30	30·27	W.	...	118	85	63	64	71	Fine
" 31	30·45	S.E.	...	120	83	60	60	63	Cloudy
Aug. 1	30·40	S.E.	...	121	81	60	61	66	Hazy
" 2	30·15	S.E.	...	122	80	60	63	68	Hazy
" 3	29·99	E.	...	121	82	63	66	70	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (12th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received: *Sheffield Daily Telegraph, Birkenhead News, Daily News, Leicester Daily Post, Dewsbury Reporter, Glamorgan Times, Stalybridge Herald, Fifeshire Advertiser, Bradford Observer, Birmingham Daily Post, Standard, Nottingham Daily Guardian, Morning Advertiser, Western Morning News, East Anglian Daily Times, Bristol Mercury, Times of India, Pioneer Mail, Architect, Scotsman, Citizen, Builder, Yorkshire Post, Scarborough Post, Brighton Gazette, Liverpool Daily Post, Cornish Telegraph, Leeds Mercury, New Zealand Times, Harrogate Herald, Health, Nature, Sanitary Record, Local Government Chronicle, Mining Journal, Reading Mercury, City Press, Hertfordshire Mercury, Anglo-Saxon, Bromyard News, Electrical Review, Flintshire Observer, Record, Chudleigh Weekly Express, Dunstable Borough Gazette, Local Government Journal, Woking News and Mail, Lurgan Mail, Ceylon Standard, Surrey Advertiser, Australasian Medical Gazette, Windsor Chronicle, Weekly Free Press and Aberdeen Herald, Warder, The Manxman, Oban Times, Cornishman, Brighouse News, Buckingham Express, Chesham Advertiser, Hastings News, Caterham Free Press, &c., &c.*

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

***Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.**

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1899, which was completed with the issue of June 24th, and the Title-page to the Volume, were given in THE LANCET of July 1st.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1899 are now ready. Bound in cloth, gilt lettered, price 18s., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2s., by post 2s. 3d.

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

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Subscriptions (which may commence at any time) are payable in advance.

Communications, Letters, &c., have been received from—

A.—Dr. F. Arnold, Buluwayo; Abstainers' and General Insurance Company, Ltd., Birmingham; Ancoats Hospital, Manchester, Secretary of; Mr. H. Athill, Crutwell, Edinburgh.

B.—Mr. C. J. Bond, Leicester; Mr. C. Birchall, Liverpool; Messrs. Blackie and Son, Lond.; Messrs. Bates, Heody, and Co., Reading; Mr. B. Barnett, Lond.; Bradford Eye and Ear Hospital, Secretary of; *Birmingham Daily Post*; Dr. Th. Bérault, Paris; Mr. H. L. Barnard, Lond.; Dr. William Butler, Harlesden; Mrs. Browett, Coventry; Dr. H. C. Bastian, Lond.; Mr. P. F. Barton, Wimbledon; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. W. Blackwood and Sons, Edinburgh; Dr. Beer, Vienna.

C.—Mr. J. W. Cundall, Lond.; Cortland Wagon Co., Lond.; Current Literature Publishing Co., New York, U.S.A.; Mr. J. Charleton, Belfast; Mr. H. S. Collier, Lond.; C. S. B., Ilford; Dr. Aldous Clinch, Ferry Hill; Messrs. J. and A. Churchill, Lond.; Mr. B. Cooper, Lond.; M. A. Cognet, Paris; Messrs. Cuzson, Gerrard, and Co.; Dr. W. J. C. Coulthard, Aspatria; C. A.; Messrs. Clay, Paget, and Co., Lond.

D.—Mr. A. Duke, Cheltenham; Doré Gallery, Lond., Proprietors of; Devon County Asylum, Exminster, Superintendent of; Dalrymple Home, Rickmansworth, Medical Superintendent of; Mr. F. Davidson, Lond.; Dr. T. B. Dunn, Lond.; Dental Hospital of London, Secretary of; Messrs. S. Deacon and Co., Lond.; Dorset County Hospital, Dorchester, Secretary of; Dr. J. H. Dauber, Lond.

E.—Dr. G. C. Elliott, Ainadale; Messrs. Eason and Son, Dublin; Misses Estcourt and Spooner, Lond.; Mr. J. Bentall Endean, Cockington; Colonel Engledue, Lond.

F.—Flower House, Catford, Medical Superintendent of; F. C. A.; Dr. Foxwell, Birmingham.

G.—Lady Grey, Aliwal, South Africa; Mr. T. Godding, Lond.; Dr. P. N. Gerrard, Selangor; Messrs. Goddard, Massey, and Warner; Great Eastern Railway, Lond., Continental Traffic, Manager of; Dr. C. W. MacGillivray, Edinburgh; Messrs. R. Gallais and Co., Lond.; Messrs. Gordon, Alexander, and Co., Lond.; G. P. E.; G. de V. B.

H.—Mr. Huxley, Lond.; Dr. T. W. Hime, Bradford; Mr. O. E. Horn, Bournemouth; Mr. G. G. Hamilton, Portrush; Mr. Victor Horsley, Lond.; Dr. G. A. Heron, Lond.; Mr. H. B. Haycock, Alfreton.

I.—Messrs. I. Isaacs and Co., Lond.; Incredulous.

J.—Mr. H. James, Lond.; Dr. B. Jepson, Durham.

K.—Mr. J. King, Lond.; Mr. R. H. Kennan, Dublin; Mr. L. B. Kay-Shuttleworth, San Remo.

L.—Messrs. Lee and Nightingale, Liverpool; Messrs. H. and S. Livingstone, Edinburgh; Lunatic Hospital, Nottingham.

M.—Dr. J. Moore, Farnborough; Mr. R. Merck, Lond.; M.R.C.S., London; M.R.C.S., Bristol; Dr. J. W. Mason; Manchester Royal Infirmary, Secretary of; Dr. W. F. Macnaughton, Lond.; Dr. Chowry Muthu, Lond.

N.—Mr. H. Needes, Lond.

O.—Dr. P. T. O'Sullivan, Cork; Oxford Eye Hospital, Hon. Secretary of; Mr. Offord, Lond.; Messrs. Orridge and Co., Lond.

P.—Mr. Y. J. Pentland, Edinburgh; Messrs. Pearson and Co., Hamburg; Messrs. Parke, Davis, and Co., Lond.; Dr. J. F. Payne, Lond.; Mr. F. Perceval, Whittingham; Dr. F. C. Palmer, Woking.

Q.—Quex.

R.—Mr. R. Redpath, Newcastle-on-Tyne; Royal College of Surgeons in Ireland, Dublin, Registrar of; Royal Albert Hospital, Devonport, Secretary of; R., Bristol; Messrs. Reitmeyer and Co., Lond.; Dr. E. H. Roe, Lond.; Dr. A. F. Regnaud, Paris; Mr. C. B. Rossiter, Llanfairpwllgwyn; Mr. A. M. Roberts, Little Hadham; Mr. H. A. Rademacher, Westport, U.S.A.; Professor Waymouth Reid, Dundee.

S.—Mr. A. Streiff, Lond.; Mr. F. W. Sears Lond.; Messrs. W. H. Smith and Son, Manchester; Mr. H. P. Symonds, Oxford; Mr. E. Schloesser, Zermatt; St. Mungo's College, Glasgow, Secretary of; Dr. N. J. Sinclair, Brechin; Mr. C. E. G. Simons, Merthyr Tydfil; Dr. S. H. Smith, Whitby; Messrs. Street Bros., Lond.; Dr. Priestley Smith, Birmingham.

T.—Mr. J. R. Thompson, Lond.; Dr. W. Bealy Thorne, Lond.; Mr. H. R. Foster Towne; Tynemouth Victoria Jubilee Hospital, Secretary of; Tuborg Lager Beer Agency, Newcastle-on-Tyne; Dr. A. Thom, Crieff.

U.—Messrs. Unwin Bros., Lond.; Union is Strength.

V.—Victoria Carriage Works, Lond.; Vineyard Basket Wine Co., Lond.; Viator, Stockholm.

W.—Mr. C. A. Whall, Worksop; Messrs. J. Wright and Co., Bristol; West Kent General Hospital, Maidstone, Secretary of; W. X. Y.

X.—X. (cm); X. (R.).

Letters, each with enclosure, are also acknowledged from—

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Price

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EXTRACT FROM THE LANCET, March 5th, 1898:—"Messrs. ARNOLD & SONS, of West Smithfield, inform us that they have constructed a cabinet for the storing of surgical appliances at a price that will place it within the reach of every general practitioner. It is made of iron enamelled white, with ¼-in. polished plate glass top, back, sides, and door, with two plate-glass shelves with polished edges, and is manufactured in two sizes—18 × 15 × 8 in., 35s.; and 24 × 18 × 11 in., 55s. The Cabinet should prove useful to many institutions and practitioners."

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(AN IMPROVED STETHOSCOPE).

Patented.

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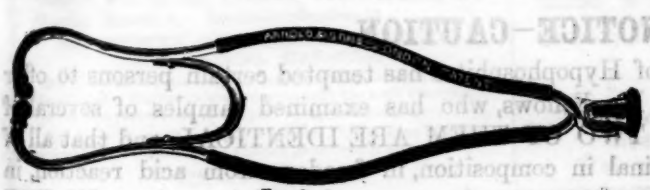

FIG. 2.

FIG. 3.

UNSOLICITED TESTIMONIALS.

"DEAR SIRS.—I beg to thank you for the best Stethoscope I have ever used, and during the last forty years I have used a good many.—Yours faithfully, W. M. D."

"Cumberland.

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"Bournemouth.

"DEAR SIRS,—Your Phonophore is a very ingenious Stethoscope; it has wonderful sound-conducting qualities.—Yours faithfully, W. P. C."

"Machynlleth.

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"Northampton.

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"Merthyr Vale.

"GENTLEMEN.—Your Phonophore-Stethoscope received is very satisfactory.—Yours faithfully, D. K. D."

PHONOPHORE (Single) with metal stem, nickel-plated, vulcanite ear-piece, and india-rubber cap fitted to chest-piece, complete (Fig. 1)	£0	5 6
Do. Binaural, with india-rubber ear-pieces and cap fitted to chest-piece, complete (Fig. 2)	0	12 6
Do. with flexible india-rubber tube, ear-piece, and plated mount, complete (Fig. 3)	0	6 6
Do. Chest-piece only, for attaching to Binaural Stethoscope	0	5 6

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"The *Berliner Klinische Wochenschrift* for March 22nd, 1897, speaking of some experiments made under Professor Gerhardt's direction in the Charité Hospital as to the value of APENTA water in the treatment of obesity, says that such experiments could not be carried out until quite recently, on account of the inconstant composition of the bitter waters coming into the market. In this respect, the APENTA water is favourably circumstanced, and it was chosen for these observations because of its constancy of composition. The conclusions arrived at as to the value of APENTA in the treatment of obesity, and as to its influence on tissue-change without causing any nutrient losses, were that it succeeded in producing a reduction of fat in the body without detriment to the existing albumen, and that the general health of the patient suffered in no wise, and the cure ran its course in a satisfactory manner."
—NEW YORK MEDICAL JOURNAL, Feb. 5th, 1898.

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The best ferruginous preparation known in therapeutics. Absorbed in the form of Chloro-albuminate of Iron, therefore very digestible. Considered a real specific for

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Causes neither constipation nor diarrhœa.

·385 grain (0·025 gm.) of Protochloride of Iron, chemically pure, in each Pill.

Dr. Laville's Liquor and Pills.

Immediate relief of paroxysm in Gout without any chance of repercussion. Dissolution of tophi.

The Liquor to be taken in the acute stage.
The Pills in the chronic stage.

From ½ teaspoonful to 3 teaspoonfuls of the Liquor; from 4 to 6 Pills per day.

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Prescribed by the late eminent Professor CHARCOT.

An invaluable Specific for Nervous Troubles, such as

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Made of gluten that is very soluble and containing: Copaiba and Sandal Essence; Copaiba, Cubebs, and Sandal Essence; Copaiba, Iron, and Sandal Essence. Specially effective in

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Two of these Pills per day will be found a very prompt and effective remedy for all kinds of

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·003 of a grain (0·000.. gm.) of Crystallised Aconitine
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Free from Alkaline Iodides. Palatable. Easily assimilated.

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A perfect substitute for Cod Liver Oil and Iodides.

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One tablespoonful at meals twice a day.

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Aloin,	1-6 gr.
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Ext. Belladonnæ,	1-8 gr.

This pill is recommended in Chronic Constipation.

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Ext. Ergotæ,	3 gr.
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Ferri Phosphatis,	2 gr.
Quininæ Phosphatis,	1 gr.
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210 **FERRUGINOUS (Blaud's)**

Ferri Sulph.,	2½ gr. (B)
Potassii Carb.,	2½ gr.

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Quininæ Sulphatis,	1 gr.
Ferri Reducti,	1 gr.
Strychninæ,	1-30 gr.
Acidi Arsenosi,	1-30 gr.

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Quininæ Valerianat.,	1 gr.
Ferri Valerianat.,	1 gr.
Zinci Valerianat.,	1 gr.

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Strophanthi Tinct.,	3 mins.
Digitalis Tinct.,	6 mins.

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Quininæ Sulphatis,	1 gr.
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Piperidine possesses uric acid solvent powers greatly superior to any other known substance, and, in combination with tartaric acid, forms a pleasant salt, which may be taken in 5 to 15 gr. doses in a wines, mineral waters, &c., at or before meals.

(See THE LANCET, July 29th, 1899; BRITISH MEDICAL JOURNAL, Feb. 27th, 1897; CENTRALBLATT DER PHYSIOLOGIE, Bd. iii., p. 454.)

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This **REMEDY for PHTHISIS**, which combines the antiseptic properties of Guaiacol with the vascular tonic action of Piperidine, has been tried with considerable success at the London and other Chest Hospitals. It has not the irritant properties of Guaiacol, and possesses many advantages over the latter substance and preparations of the same now on the market. DOSE: from 15 gr. twice a day, preferably in cachets, after meals.

(See BRITISH MEDICAL JOURNAL, January 16th, 1897, and July 16th, 1898, &c.)

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